



THE CHEMIST AND DRUGGIST

ESTABLISHED IN

TELEPHONE
1852
NUMBER

TELEGRAPHIC
ADDRESS
CHEMICS LONDON.

CHIEF OFFICE,
LONDON
42 CANNON ST.
E.C.

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No. 496. VOL. XXXV.

OCTOBER 19, 1889.

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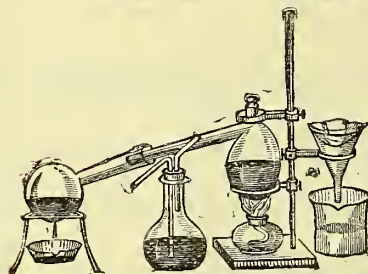
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By **M. K. HARGREAVES, M.D.**

Assistant Physician to St. John's Hospital for Diseases of the Skin.

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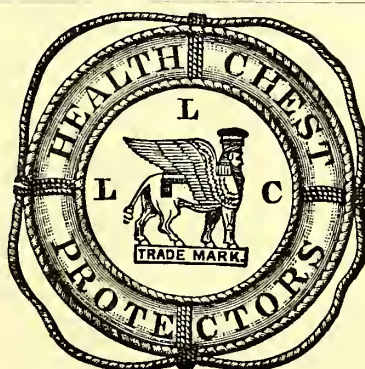
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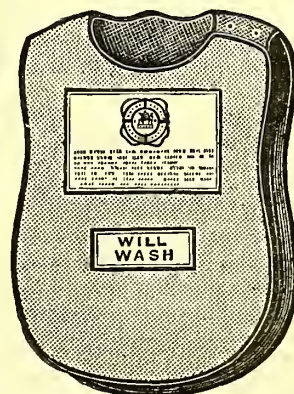
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Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of 1d. per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or if he pays 1d. per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C." and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as e.g., £1 10s. 6d.

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Proprietary Articles.

Eighteen bottles Allen's restorer, 6 doz. Kepler's c. ol., 2s. 6d.; perfectly fresh, clean. 113/30.

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The Chemist and Druggist, vols. 1837, 1868, 1871, 1872, 1875, 1876, 1878, 1830, 1832, carriage paid, 3s. 6d. per volume; several odd numbers also. Williams, Hayle.

Educational.

Attfeld's "Chemistry," 1885 edition; good as new; what offers? "Minor," 63 Carleton Road, Tuffnell Park.

Formula.

Reliable recipes, 6d. each; full set of 130 neatly copied in book, 7s. 6d.; send for list. "Chemist," Edwards, Wye, Kent.

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Specie jars; height, including gilt covers, 2 ft. 8 in.; labelled "Arrowroot," "Magnesia," coat of arms; good condition; mahogany stands; price for two, 5l. Wade, Sidcup, Kent.

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Miscellaneous.

Hooper's water bed, 40 by 30; very little used; what offers? 112/8.

Surplus patents, 6 gross caper bottles, and drugs; send stamp for list. 113/23.

Offers wanted for Bracher's patent still, gallon size; never used. Evans, Teignmouth.

Harness' electrophatic belt, half price, cost 4l. 4s., not been worn many times. 113/25.

3 oil drums, 4, 8, and 12 gallon, cost 21s., used once; price 12s. Gray, Rothwell, Kettering.

Honey, 1889, English; excellent quality; 7d. per pound; packages free. Brampton, Sudbury, Suffolk.

18 boxes choice cigars in dispute, cost 15s., price to clear 9s. 6d. 100. Slater, Beeston Hill, Leeds.

Genuine English beeswax, good bright colour, clean, about 3 cwt.; what offers for whole or part? Wise, Chemist, Launceston.

Lamproug's saline, fresh and clean, 21s. 6d. dozen; gum, fair quality, 6d. per lb. Boot's Drug Co. (Lim), Nottingham.

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One brass enema apparatus as Maw's fig. 7, second hand, six connections; one new ½ pint Equisier's irrigateur, fig. 18, cheap. Lawrence, Chemist, Peel, Man.

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Brass paste, Helmet brand, 1d. tins, 4s. 6d. gross—10-gross lots, 4s. gross; 50-gross lots, 3s. 6d. gross. Rice starch, 1-lb., ½-lb., and ¼-lb. fancy picture boxes, 56-lb. cases, 21s. 6d. per cwt. Best paraffin matches, small, 50-gross case, 2l. 10s.; large, 1s. 4d. gross in 25-gross cases, free on rails Hull. Send stamps to cover cost for sample. Beckett, Barnston Street, Hull.

3 stamps black pitch, 5s. each; 30 lbs. ol. lavand. exot. opt., 14 years old, 1s.; 90 lbs. cocoa nut oil, 4d.; 15 4-lbs. mag. carb. levis, 3d.; 4 lbs. ess. bergamot, extra super (Southall), 8s.; 5 lbs. ess. pineapple, 2s.; 5 14 lbs. ivory black, 1d.; 57 bath bricks, 3s. the lot; 21 2-lbs. vegetable black, 6d.; 11 10-lbs. amber resin, 1d.; 7 Kaye's Worsdell's pills, 6d.; 3 cwt. soda crystals, 2s. "Chemicus," L. and C. C. Club, Leeds.

Wright's ventilating gas stove, cost 35s., 20s.; Wright's radiating ditto, cost 32s., 15s.; Bracher's automatic still, copper, 2, 20s.; volumes 15, 16, *Pharmaceutical Journal*, 1s. 6d. each; number of botanical and other lantern slides, 1s. 3d. each, 12s. dozen; brass counter scales, fig. 1, to weigh up to 4 lbs., without drawer, 30s.; brass counter scales, fig. 5, up to 7 lbs., 25s.; both in thorough repair. Francis E. Rookledge, Easingwold.

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Good 36 4-grain pill machine, and box-end scales. Thompson, Bedworth.

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Full price (4d. each) will be paid for copies of *The Chemist and Druggist* for October 12, 1889, sent to the Publisher, 42 Cannon Street, E.C.

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For Hot Water, Infusions, &c.

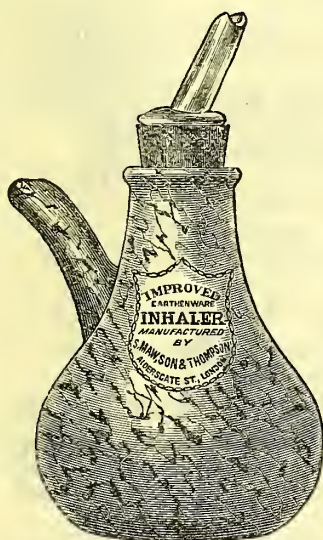


FIG. 8.

MAW'S IMPROVED.

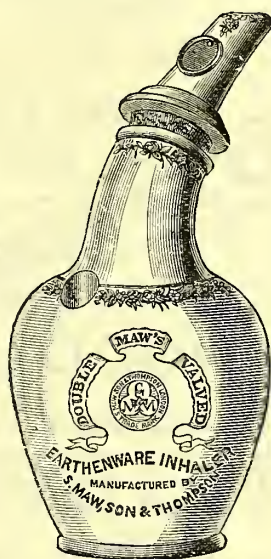


FIG. 6.

MAW'S DOUBLE-VALVED.

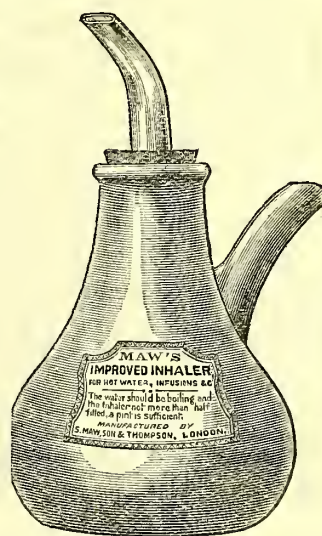


FIG. 8a.

MAW'S IMPROVED.

Fig. 6.—Double-Valved, 60/- per dozen; with Elastic Tubes, 78/-

Fig. 8.—Marbled, 32/ per dozen.

Fig. 8a.—White, 21/- per dozen.

Fig. 8a.—White, half size, 13/- per dozen.

ELASTIC TUBES, with Mouthpieces, to fit Fig. 8 and 8a, 7 inches long, 8/- per dozen; 9 inches long, 12/- per dozen.

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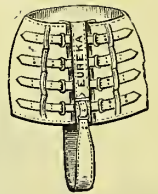
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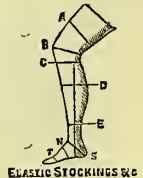
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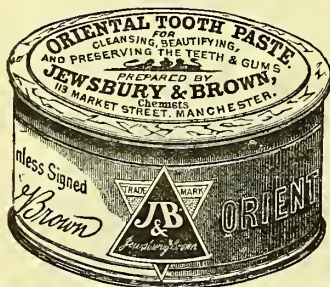
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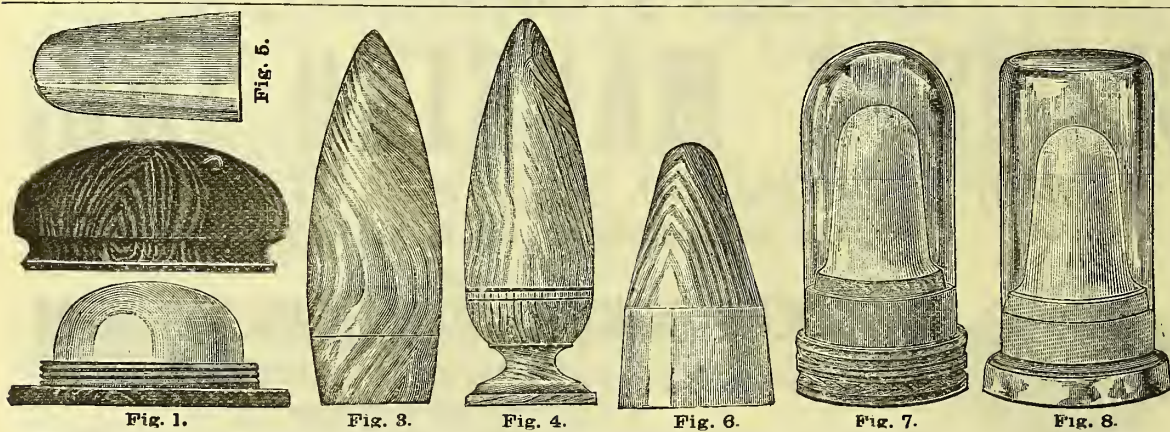


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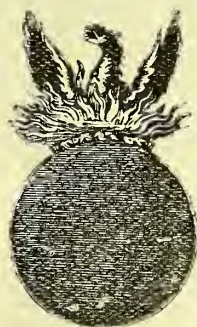
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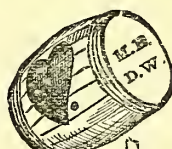
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GOODALL'S PLATE POWDER.

For Polishing and Cleaning all Metals. Boxes, 6d., 1s. and

GOODALL'S JELLY SQUARES.

Make a Delicious and Nutritious Jelly. In ½- and 1-pint boxes, 3d. and 6d. each.

PROPRIETORS—GOODALL, BACKHOUSE & CO., LEEDS.

PATENT MEDICINES AND

DRUGGISTS' SUNDRIES.

Monthly Price List of Patent Medicines, Druggists' Sundries, &c., will be sent post free on application to

GOODALL, BACKHOUSE & CO., LEEDS.

THE "LONDON-MADE" SYPHON BOTTLE

(TITLE REGISTERED).

Obtained the HIGHEST AWARD at the International Health Exhibition, London, 1884.



The high reputation this bottle has achieved is due to the fact of its being in every particular the most perfect yet introduced; and when compared with others in the market it stands pre-eminent. It is most simple in its working parts, therefore the least liable to get out of order; it is the most easily opened, the lightest pressure on the handle being sufficient; it produces a more highly-charged gaseous water than is usually obtained from syphons; it compares most favourably in appearance with any, and the metal top being entirely free from lead, the prejudice against syphon drinks is at once removed, as the liquid passes over pure tin only.

All our Syphons are now fitted at the base with a groove, so that drips from the spout that run down the sides are prevented from soiling the table. See drawing.

NOTE.—Syphons made with our patent foot for collecting excess of liquid dripping from the spout after use are supplied at no extra charge, and will be found of great utility in preventing stains, &c., upon table linen. This is a desideratum long been wanting, particularly for private-house use. Send for sample; forwarded upon receipt of 2s.

Any name, crest, or trade-mark put on the glass by an improved acid process, at from 1s. to 4s. per gross. There is a three-fold advantage in this, as it forms a continual advertisement, is a great ornament, and a preventive of fraud. The plate for engraving costs extra from 5s. upwards, according to the artistic device required.

PRICES (WHITE, BLUE, GREEN, OR AMBER):—

	By the gross, per doz.	Less than 1 gross, per doz.
Quart size	21 2 0	21 4 0
Pint size	1 10	1 8 0
Half-pint, Pear shape	1 0 0	1 2 0
Octagonal vases, any colour (including Azure Blue)	1 4 0	1 6 0

Tops, nickel-plated, from 5s. 6d. per doz. extra. Tops, silver-plated and burnished, from 7s. per doz. extra. A charge is made for packing, except when ordered in the present tin cases (holding one dozen each, price 7s. 6d. each).

Please Note.—B. & F. are the only firm manufacturing Syphons in England that do not supply them filled, and so compete with their customers' trade.

BARNETT & FOSTER,

MINERAL WATER ENGINEERS,

Manufacturing Chemists, and General Providers for the Aërated Water Wine, Beer, and Cyder Trades,

"Niagara Works," 26th Eagle Wharf Road, London, N.

Send for Price List of Soda-water Machinery and Accessories.

A Copy of this Supplement is inserted in every number issued of "The Chemist & Druggist."

The Chemist and Druggist

SUPPLEMENT

Businesses Wanted.
Businesses for Disposal.
Premises to Let.
Auction Sales.

SATURDAY, OCT. 19, 1889.

Partnerships.
Situations Vacant.
Situations Wanted.
Miscellaneous.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION.

The business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1843, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

1.—£600.—LONDON, S.W.—Very old-established good-class Retail and Dispensing Business; returns £600; large shop, well situated; good house attached; valuation of stock and fixtures only required.

2.—£700.—LONDON, N.W.—Very old-established good-class Retail and Dispensing Business, held by vendor many years, now retiring; returns last year nearly £700, net profits nearly £300; shop well fitted and good stock; convenient house attached; price to an immediate purchaser £350.

3.—£800.—LONDON SUBURB, W.—Good-class Dispensing and retail; established over 40 years; returns £800 yearly, very profitable; well-fitted shop and good stock; price £650, part can be paid by instalments if wished.

4.—£800.—SOUTH DEVON.—Attractive town; good-class Retail and Dispensing Business, held by vendor 20 years; returns £800 yearly, with good profits; well-fitted corner shop and good stock; good house attached; price £475; worth attention.

5.—£1100.—SURREY.—Attractive locality; good-class old-established Business with profitable Agency attached; returns over £1,100; good house and garden; rent moderate; about £300 required.

6.—£500.—SOUTH WALES.—Good town; Retail and Dispensing Business; returns nearly £500 yearly; large shop, well-fitted, and good stock, with convenient house; price about £450.

Gentlemen prepared to invest about £3,000 are invited to apply to Messrs. Orridge & Co., regarding several Country Businesses, Wholesale and Retail combined.

Particulars of any of the above will be furnished on application.

N.B. NO CHARGE TO PURCHASERS.

Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free.

TERMS FOR VALUATION ON APPLICATION. APPOINTMENTS BY POST OR WIRE HAVE IMMEDIATE ATTENTION.

Messrs. ORRIDGE & Co. invite communications from COLONIAL and FOREIGN firms where business of a confidential nature requires the especial attention of a London agent.

SPECIAL NOTICE.—TO PRINCIPALS AND ASSISTANTS.

MESSRS. ORRIDGE & Co. Register Vacancies for Situations FREE OF CHARGE.

ORRIDGE & CO., 32 Ludgate Hill, LONDON, E.C.

PARTNERSHIPS.

SMART business man (young) wanted with £300 cash or security as Assistant with view to Partnership to extend a well-established business; proprietary articles, far superior to anything in Drug trade; great scope; no other qualification required than tact, energy, and go. "Vox Populi," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED Partner, with about £500, to join in purchase of an old-established Wholesale, Drug, and Drysaltery Business, with a good connection in Lancashire and Yorkshire; for a good practical man, not afraid of work, this is a rare opportunity to join a good paying business, capable of improvement; death cause of sale. Apply, "Opportune," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£400.—Partnership in old established genuine mixed country Business; good returns and profits; can be largely increased with good partner of business habits, and not too fond of society; good salary guaranteed, with rooms free on premises, and half share of net profits; investigation courted, but none without the needful need apply. "Zingiberus," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

A FIRM of Wholesale Druggists' Sundriesmen and Patent Medicine Dealers are desirous to combine Drugs with their business; as they have already a large connection with Chemists, a good opportunity is presented to anyone with capital, and with a knowledge of Drugs, to undertake this department on terms that may be agreed upon. Address, in the first instance, to G. Brash Wheeler, Esq., Solicitor, 11 Queen Victoria Street, London, E.C.

TENDERS.

BOROUGH OF PORTSMOUTH.

THE Urban Sanitary Authority invite Tenders for the supply of Disinfectants. Particulars, Forms of Tender and Conditions to be obtained at the Municipal Offices, Arundel Street, Landport, and Tenders, endorsed "Tender for Disinfectants" are to be delivered at the Municipal Offices not later than 10 A.M. on Tuesday, the 12th of November, 1889.

ALEXANDER HELLARD,

Dated 17th October, 1889.

Town Clerk.

FOR SALE.

THE entire Fittings of a Chemist's Shop, £50, fixed; complete list and illustration on application. Elkanah Natali, 207 Old Street (near County Court), Shoreditch. Only address; no connection with any other house.

ENTIRE Stock and Fixtures of a Chemist's shop, also valuable Proprietary Articles; must be sold at once; no reasonable offer refused; cash required about £400. "Pilula," care of Messrs. Wyleys & Co., Coventry.

500 YARDS vacant Building Land; all or part for disposal; handsome street, in rapidly-increasing Lancashire town; no Chemist near; good opening for one, or for stores, or any business requiring good showing facilities; reasonable prospect for good business and improvement in value. Address, R., 31 Scotland Road, Nelson, Lancashire.

F. J. BRETT,

VALUER, LEICESTER,

60 St. Stephen's Road.

References to principal London and Provincial Wholesale Houses, also to numerous clients throughout the United Kingdom.

BUSINESSES THOROUGHLY INVESTIGATED FOR BUYERS. 20 YEARS' EXPERIENCE.

LONDON, S.W.—Unopposed; pleasant suburb; Light Retail, Dispensing, and Prescribing, with Gilbey's Agency; returns £1,100; also appointment worth £65 per annum; good house, garden, long lease; price £800.

(L)oucestershire.—Fashionable town.—Light Retail and Dispensing; ill-health cause of sale; fine double-fronted Shop in good position; returns average £900; one speciality alone worth £100 per annum; price £800.

SOMERSETSHIRE.—Seaside Light Retail, Dispensing, and Prescribing; no heavy trade; returns £900; good house, garden; illness cause of sale; price £700.

BERKS.—Retail, in good country town; returns £400; plenty of scope for agricultural; price £300.

MANCHESTER.—Dispensing and Light Retail, with good specialities; exceptionally good house; returns £700; net profit £300; price £550.

Stock and Fixtures, nearly new, together or separately as desired; well worth the attention of parties refitting.

SYDNEY GREENWOOD, A.I.A.

Assessor of Fire Claims with the Insurance Offices,

Licensed Valuer to the Drug and Allied Trades, Chemists' Transfer Agent and Accountant,

PITVILLE HOUSE, Lea Bridge Rd., CLAPTON, N.E.,

Begs to inform the Trade generally that he has for many years been associated with the Transfers of Chemists' and Druggists' businesses, also with Valuations for Probate, Stocktaking, and Transfer, and that he still continues to carry on his business on the lines of that established in the year 1870, thus enabling him to settle with promptitude any business matter placed in his hands.

Having recently settled some of the largest Fire claims in the metropolis with the Fire offices, ranging up to £10,250, he is in a position to act for the assured after a fire has taken place, and in many cases effect a considerable saving, being well accustomed to the difficulties arising in making claims. For Transfer:—

STAFFORDSHIRE.—Returns £1,000; profitable Mixed, cash trade; rent £40; noble-looking house, well-fitted and stocked; price £750 (a bargain).

LINCOLNSHIRE.—Returns £500, formerly £900; rent £50; price £250. Another, returns £1,000; low rent; profitable Family trade; price £800.

N.B.—Numerous others on application to Mr. SYDNEY GREENWOOD, as above.

MESSRS. BERDOE & CO.

CHEMISTS' TRANSFER AGENTS & VALUERS,

30 JEWRY STREET, ALDGATE, E.C.

Established 1870.

VENDORS will find our Offices a quick medium for the Sale of genuine Businesses. Strict confidence guaranteed. Several good-class Businesses wanted returning £700 to £1,500. Town or country.

PURCHASERS are invited to apply (stating their requirements) for particulars of businesses, sent free on application.

MESSRS. BERDOE & CO. have for Transfer:—

SOMERSET.—Rising seaside resort; Light Retail and Dispensing Business; returning over £900; double-fronted shop; stock and fixtures worth £600; good house, long garden; price £700, or offer.

SUFFOLK.—Unopposed Village Business; very select Retail, Dispensing, and Prescribing Trade; returning £750; all drugs; net profit £300; low rent; 10-roomed house; ½ acre of garden; price £500.

MIDLAND COUNTY.—Good-class Retail and Dispensing Business in an important town, making a net profit of £400 a year; handsome shop, elegantly fitted; price £750, or offer.

WEST OF ENGLAND.—Important seaport town; Light Retail, Dispensing, and Prescribing Business; returns over £800; net profit £350; owner retiring after 20 years; unopposed position; price £500.

KENT.—Commanding position in market town, 30 miles from London; Light Retail and Dispensing; returns £700; price £450.

SURREY.—Very attractive locality; good-class Light Retail and Dispensing Business, returning £1,000, with net profit of £400; good house and garden; elegantly fitted shop in best position; price £750.

DEVONSHIRE.—Unopposed, pleasantly situated Light Retail and Dispensing Business; returns £525; double-fronted shop, 8-roomed house with garden; rent £25; price £220; net profit £200.

LONDON, N.—Main road; Branch Business; returning £500 under manager; principal will do £800; price £225.

Terms for Valuation and Sale on application.

Messrs. Berdoe & Co., 30 Jewry St., Aldgate, London, E.C.

Mr. G. B. CROCKER,

Trade Valuer, Transfer Agent, & Accountant,
15 WALBROOK, E.C.

HOME COUNTY.—Retail, Prescribing, and Dispensing; returns approach £700; price, valuation of stock and fixtures; good house and handsome pharmacy.

DEVON.—Old-established Retail and Dispensing trade in capital position, market town; returns £800; price £550.

WEST OF ENGLAND.—Good-class Retail and Dispensing trade; returns £600; price £450; low rent; good house.

YORKSHIRE.—Retail and Dispensing trade; returns £700; price £550; a thoroughly sound and reliable investment.

SOMERSET.—Retail and Dispensing trade, in pleasant market town; returns over £900; price £700; worth attention.

LONDON, N.—Death vacancy; old-established Dispensing trade; returns £900; price £650, to effect a speedy sale.

LONDON, S.—Retail and Dispensing; returns £700; net profit £300; price £550.

LONDON, N.E.—Retail and Prescribing; in main thoroughfare; returns £400; price £200.

Valuations for Probate or Transfer conducted in any part of the United Kingdom. Terms on application.

THOS. TOMLINSON & SON,

9 New Cannon St., MANCHESTER,

Will shortly have for disposal, owing to serious illness of proprietor, a splendid Chemist's Business in Cheshire, doing above £1,400 a year; Dispensing and good Family Retail exclusively; incoming from £1,100 to £1,200.

Have also an excellent business, doing £850, in a good town a few miles from Manchester; amount required about £800.

Both old-established and increasing, and several others of less amounts, intending purchasers for which must please give requirements and amount of capital.

BUSINESSES FOR DISPOSAL.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

OLD-ESTABLISHED Business, S.W., for immediate disposal; price, including lease, fixtures, and good stock, £130, or offer; rent £35. Address, S.W., Office of THE CHEMIST AND DRUGGIST, 42 Cannon St., E.C.

READY-MONEY Surgeon's Retail; long established; owner, not able to devote much time, is willing to realise at nominal price; no agents dealt with. Apply, J. K., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

CHEMISTS—For sale, by order of executors; same hands for 40 years; good shop, in main S.E. thoroughfare, near City; price low; about £600 required. Apply personally to Mr. Percy Matthews, 1 Albany Street, Regent's Park, N.W.

A SMALL Business in a busy thoroughfare, in the hands of the present proprietor 35 years (retiring), to be sold at a valuation; shop well fitted; gas in each room; house convenient; rent £24. Apply 22 Charlotte Street, Landport.

A N old-established Chemist's Business to be disposed of (in consequence of ill-health); in present owner's hands over 40 years; full prices; no patents; price for lease, goodwill, fixtures, and fittings £140. Apply to H. H. Meggeson & Co., 14 Miles Lane, E.C.

A Prescribing and Dispensing Business, situate in the main thoroughfare of an East Coast port and seaside resort of increasing popularity; one opponent; a capable and energetic man would find here an excellent opportunity. Apply to Burton & Son, Solicitors, Great Yarmouth.

DENTAL Practice.—Old-established, advertising, in one of the largest manufacturing towns in Yorkshire; average returns for last 8 years £350; 10-roomed house; rent £22; declining health cause of retiring; price £100 cash; every information given. George Duncan, 19 Gloucester Terrace, Leonard Street, Hull.

NEAR Tunbridge Wells.—Excellent position in one of the prettiest and healthiest parts of Kent; a good Prescribing and Dispensing Business; plate-glass front; modern fixtures; large house and garden; proprietor taking larger concern. Particulars of A. C. Farmer, Chemist, 108 London Road, Southborough.

LONDON, East.—Under exceptional circumstances, two branch Retail and Prescribing Businesses in a main thoroughfare, commanding the entire trade of a large district; now under junior management; old-established; rent low; returns £550 to £600; price £390 together; principals only. "Cymro," Deacon's, Leadenhall Street, London.

£200 or offer, or by valuation, a ready-money Retail; densely populated locality, North of London; returns £8 to £12 per week, entirely in small retail; rare chance for good prescriber; rent £40; good house; must be sold; first reasonable offer accepted. Apply, Messrs. Berdoe, 30 Jewry Street, Aldgate, London, E.C.

LANCASHIRE.—Popular seaside; immediate disposal; high-class Dispensing and Family Business; established 1852; handsomely fitted; profits large; situated within few yards of Promenade; rent £80; excellent house, private entrance; could be let easily for half rent; cash price £500. Apply, "Marine," J. Thompson, Wholesale Druggist, Liverpool.

ESSEX.—Unopposed Druggist's Business, with Wine and Spirit Agency, for disposal; returns last year over £600; population of village and immediate neighbourhood 5,700; half-mile from station; convenient house, warehouse, stable, and good garden; price £300. "Stadim," care of Messrs. Evans, Lescher & Webb, 60 Bartholomew Close, London.

FASHIONABLE TOWN (West).—Good-class Retail and Dispensing; returning £500 with only partial attention; energetic man could soon increase materially as the shop is in the best street and in commanding position; ill-health sole cause of sale; price £300. "Vendor," care of Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

£1,200 would purchase a well-established Wholesale Drug and Drysaltery Business, having an efficient working staff, and a good and varied connection in Lancashire, Cheshire, Staffordshire, Yorkshire, &c.; proprietor going to London to work a speciality, but would remain short time with purchaser, if necessary; principals only. Address "Drug," care of Rudolf Mosse, Advertising Agent, Queen Victoria Street, London.

BRISTOL.—For immediate disposal, a well-known Prescribing and Dispensing Business situate in a large neighbourhood; rent £32; 9 years' lease unexpired; commanding corner premises with stable attached; present tenant nearly 18 years; capital opportunity for one with knowledge of dentistry; capital required, about £400. Full particulars of Edward T. Parker, 39 Broad Street, Bristol.

BUSINESSES WANTED.

GOOD profitable Retail, in or near Yorkshire or Lancashire; can invest £700. "Cash," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, a genuine Light Retail and Dispensing Business, in a good country town, returning from £1,000 to £1,500, with good profits; thorough investigation will be required. Apply, "Alpha," Mr. Rae, Chemist, Newmarket.

WANTED, a good genuine Business returning about £1,000, or thereabouts, in the South, South-west, or West of England; a good London suburb not objected to; please state reason for selling and size of house; if with garden preferred. Address, R. E., 106 Lancaster Road, Newington Causeway, S.E.

TO LET.

TO CHEMISTS AND DRUGGISTS.—To be let, on The Parade, Forest Hill Station, handsome Double-fronted Shop; good residence; side and back entrances; rent moderate and will help in fitting. Apply on the premises, or to R. Hall, 168 Spa Road, Bermondsey.

TO LET, a large double-fronted Shop, with 3 sitting-rooms, 13 bedrooms, large cellar, 10 warehouses, garden, 2 kitchens, large pantry, stabling, and every accommodation attached; situated in best position of Market Square; has been established over 60 years as a Chemist's, showing profits up to last year about £700 per annum; rent £85. Further particulars of A. C. Farmer, Chemist, Southborough, near Tunbridge Wells.

TO LET, bold handsome Shop and Premises, single plate-glass front, main road, splendid position, thousands of inhabitants dependent; chemist badly needed, no other in neighbourhood; fine opportunity for an energetic man; the on'y shop empty in the locality; newly built; sure to be taken if seen. Call at 547 Barking Road, Plaistow, E.

APPRENTICESHIPS.

WANTED, Apprentice or Turnover; plenty of time allowed for study. Apply, Mr. Pride, Chemist, Old Basford, Notts.

APPRENTICE.—A well-educated youth required by Brew & Co., 10 Church Street, Great Malvern; a comfortable home and the business thoroughly taught; premium required.

ACTIVE, intelligent youth wanted as Apprentice in good-class business; comfortable home provided; time for study; moderate hours. A. Tovey, Chemist, Weston-super-Mare.

WANTED, to place as Apprentice (indoors) a well-educated youth, in good country business in the Midland counties (Staffordshire or neighbourhood of Birmingham preferred). Address, with full particulars, to B. L. M., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

SITUATIONS OPEN.

3s. 6d. for fifty words; 6d. for every 10 words beyond.

JUNIOR Assistant for Counter; tall, and of good address; state age, height, salary required, and enclose photo. Wand, Chemist, Leicester.

ARTICLED Pupil for Mechanical Dentistry.—Mr. Robert Lovitt, L.D.S. Eng., has a vacancy; outdoors; premium. 219 Albany Street, N.W.

COMPETENT Assistant, with good Dispensing and Counter experience; qualified. Apply to Brady & Martin, Moseley Street, Newcastle-on-Tyne.

WANTED, Junior Assistant (outdoors); accustomed to first-class trade. Apply, with full particulars as to age, salary required, and references, to John Teebay, St. George's Road, Bolton.

ASSISTANT wanted; Minor; outdoors; 26 or under; unmarried; permanent; good salesman. Full particulars, salary required, age, height, references, and photo to Cowan, Star Hill, Rochester.

WANTED, Junior Invoice Clerk to make up invoices; quick at figures; must write well and know the home trade. Apply, by letter only, Wyleys & Co., Wholesale Druggists, Coventry.

WANTED, for Australia, a thoroughly competent Pill Maker in all branches, especially Sugar and Gelatine Coating. Apply to "Chemicus," Second Floor, 132 Fenchurch Street, London, E.C.

TRAVELLER (on commission) wanted, for Ireland and Scotland, to represent a first-class Perfumery house; small guarantee required. Barnett & Co., Manufacturing and Export Perfumers, Birmingham.

WANTED, immediately, a competent and trustworthy Assistant for a small country business; qualified and single; about 28 or 30 years old. Apply, with usual particulars and enclose photo, to Mrs. Hall, Kelvedon.

WANTED, an Assistant, accustomed to Country Retail; able to Prescribe, Extract Teeth, and take charge when required; comfortable home and short hours. Full particulars and photo to J. H. Richardson, Alresford, Hants.

TRAVELLER, on commission only, who has other articles, to open accounts for a Table Water with Grocers, Chemists, &c.; liberal commission for each account opened. Apply, Marble Water Company, 12 Mark Lane, E.C.

AT once, Junior about 20; must be able to Dispense, and have good address at counter; salary £25; no Sunday duty; enclose carte (to be returned), and say age, height, and reference. O. F. Smart, 52 High Street, Littlehampton.

IMMEDIATELY, a Competent Junior, requiring time for study; personal application preferred; no written application without photo; will be answered; salary £30, indoors; comfortable home. Apply, Dadson, Manor Park, E.

WANTED, a Junior Clerk; a thorough knowledge of the Drug trade and a good and quick handwriting indispensable. Apply, with testimonials and particulars, by post, to Langton, Edden, Hicks & Clark, 230 Upper Thames Street, E.O.

DRUG TRADE.—Wanted, a Traveller, with a good connection amongst Surgeons in the town and suburbs; state salary and expenses required. Apply, by letter, to "Medicus," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

INVOICE Clerk wanted; must have a thorough knowledge of the Drug trade (no others need apply), and be a good and quick writer. Address, stating age, salary required, and last employ, to "Radix," care of Messrs. Street & Co., 30 Cornhill, E.C.

DRUG TRADE.—Man wanted, for Wet or Dry Counter; must have a thorough knowledge of the Wholesale trade. Apply to Mr. McCorquodale, Messrs. Burgoyne, Burdidge, Cyriax & Farries, Wholesale Druggists, 16 Coleman Street, London, E.O.

MINOR Man required (indoors); accustomed to first-class Dispensing and the compounding of Pharmaceutical preparations; state salary and all usual particulars, enclosing carte (which will be returned). Brew & Co., 10 Church Street, Great Malvern.

WANTED, a steady Assistant; indoors; age not over 30; used to country Mixed Drug and Grocery business; abstainer preferred; quiet town, comfortable home, no Sunday duties. Photo (returnable) and full particulars, E. Bond, Somerton, Somerset.

A QUALIFIED married man, who would accept free rental of four rooms, in return for a little daily help and care of premises; pleasantly situated in London suburb. Address, "Mutual," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, a Junior Assistant, indoors; must be a neat Dispenser; one accustomed to a Mixed Country business preferred. Apply, with full particulars as to age, height, and salary required, enclosing photo if possible, to Vincent W. Meacham, Chemist, Ledbury.

SEASIDE; West of England.—Wanted, qualified Assistant to manage Branch business; must be energetic, and able to work up a business; £40, indoors, advancing if suitable; steady; abstainer. Send carte and references to "Help," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

WANTED, in a fortnight, as Assistant (indoors), where Junior is kept, a reliable man; Wesleyan preferred; good prescriber and dispenser. Apply, enclosing references and carte (to be returned), and stating age, height, and salary required, to Walker, Chemist, Church Street Branch P.O., Preston.

WANTED, a Registered Chemist; used to Mixed Country Business and Post Office preferred, and thoroughly competent to take entire management; one who has had experience with good pushing firm and can furnish highest references may commence duties at once. Address full particulars, and salary expected, "Chemist," 64 Falsgrave Road, Scarborough.

SITUATIONS WANTED.

1s. for twelve words; 6d. for every six words beyond.

JUNIOR or Improver; good experience. W. J. Barrow, 138 Stanhope Street, S.W.

AS Junior; 4½ years' experience; aged 19. Long, Southgate, Chichester.

EVENING Employment wanted at Chemist's. "Meta," 8 Derby Road, Kingsland, N.

JUNIOR; aged 23; references; 6 years' experience. W. H. R., 16 Blossom Street, York.

ASSISTANT (27); London; outdoors preferred. "Spes," 15 Richmond Road, Shepherd's Bush.

AS Assistant; Wholesale or Retail; outdoors; 35; good counterman. H. D. Jennings, West Croydon.

ASSISTANT; West End experience; good references; aged 25. D. Scott, Newport, Brough, Yorks.

JUNIOR, London; Dispensing preferred; references; aged 23. W., 174 Derby Road, Southampton.

JUNIOR (19); tall; abstainer; 4½ years' experience; references. Martlew, Norman Road, Southsea.

ASSISTANT; first-class experience. "Medicus," 100 Wellington Street, Alexandra Park, Manchester.

AS Assistant; Mixed or Agricultural business; good references. "Chemicus," Hart, Painswick, Stroud.

MANAGER or Locum-Tenens; good dispenser; disengaged. "Hole," 108 London Road, Southborough, Kent.

MANAGER or Assistant; outdoors; 8 years' reference; height 6 ft. W., 62 Brunswick Street, Hackney Road, E.

LOCUM-TENENS or Manager; qualified; references; 40; disengaged 19th. G. Williams, 70 Ledbury Road, W.

BRANCH or Temporary; qualified and registered Dentist; moderate salary. 73 Shakespeare Road, Stoke Newington.

TEMPORARY or permanent; aged 30; 15 years' varied experience; free about 23rd. "Bum," 12 Foubert's Place, W.

JUNIOR; about end of October; aged 21; medium height. W. J. Saunders, 231 High Street, Mile Town, Sheerness.

WANTED, situation with view to Partnership or succession; Minor; country preferred. W., 33 Alderney Street, S.W.

AS Assistant or Branch Manager; experienced Tooth Extractor; aged 30; disengaged. "Statim," 34 High Street, Putney.

TRAVELLER; Drugs, Patents, or Sundries; London or suburbs. G. G., 26 Montpelier Place, Montpelier Square, S.W.

TEMPORARY, during absence; long experienced; gentlemanly address; moderate terms. "Pb.," 39 Powis Square, W.

MANAGER or Assistant; temporary or otherwise; in or outdoors; qualified. "Alpha," Salop Place, 59 Foley Street, Hereford.

IMPROVER; in town where there is School of Pharmacy; tall; 24; disengaged; small salary. A. Lemmon, Waterfoot, Rossendale.

ASSISTANT; aged 27; height 5 feet 6 inches; can prescribe and extract teeth. D., 14 Prince's Square, Kennington Cross, S.E.

AS Assistant; best experience; aged 36; temporary, senior, or manager outdoors. A. P. S., 70 Lansdowne Road, Clapham Road, London.

AS Junior or Dispenser; good references and experience; tooth extractor. "Wenlock," 8 Lansder Terrace, Albert Palace, S.W.

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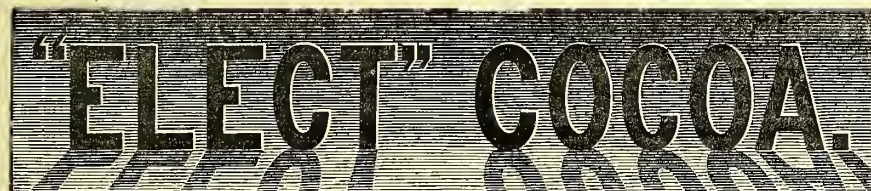
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WILLIAM ELBORNE, F.C.S., F.L.S.

Lecturer on Materia Medica in the Owens College, Manchester (Victoria University).
December 15, 1888.

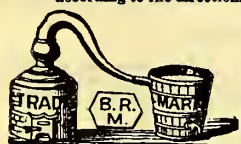
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LARGEST IN THE TRADE.
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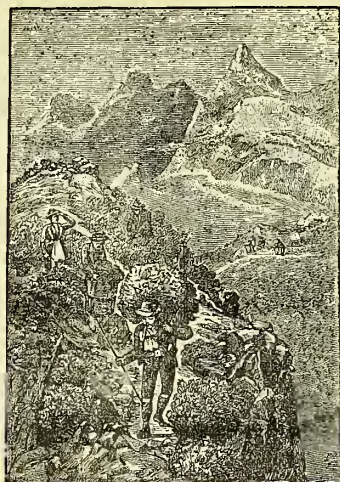
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Is a specially prepared volatile essence, distilled from a particular variety of pine, growing nearest the snow level on the Alps. It possesses exceptional medicinal properties when given internally, or in the form of inhalations, in the treatment of Pulmonary and Diathetic Affections, such as Phthisis, Rheumatism, Gout, &c. It is a valuable deodorizer and disinfectant, and has a peculiarly refreshing and fragrant odour.

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Foot of Page (A)	Foot of Page (B)	Foot of Page (C)	Foot of Page (D)	Foot of Page (E)	Foot of Page (F)	Foot of Page (G)	Foot of Page (H)	Foot of Page (I)	Foot of Page (J)	Foot of Page (K)	Foot of Page (L)	Foot of Page (M)	Foot of Page (N)	Foot of Page (O)	Foot of Page (P)	Foot of Page (Q)	Foot of Page (R)	Foot of Page (S)	Foot of Page (T)	Foot of Page (U)	Foot of Page (V)	Foot of Page (W)	Foot of Page (X)	Foot of Page (Y)	Foot of Page (Z)
Alofas Co. 56	Barber, G., & Co. 15	Cadbury Bros. Cover	Davis, J., & Co. (Lim.) 12	Eades' Gout Pills 17	Eschmann Bros. & Walsh 51	Godfrey & Cooke 50	Hamilton & Co. 54	Isaacs, I., & Co. 46	Jewshury & Brown 14	Kay Bros. (Lim.) 6	Lennon, B. G., & Co. 39	Lofthouse & Saltmer 41	Natali, E. 28	Oftinger, E. 56	Peacock, M., & R. 27	Quibell Bros. 56	Rankin & Borsland 32	Raphaël, J., & Co. 4	Sainsbury, S. 56	Taddy & Co. 27	United Kingdom Tea Co. 21	Vaccine Association 50	Walker, Troke & Co. 51	Warrick Bros. 16	Warrick Bros. 16
Ang'o-American Oil Co. (Lim.) 55	Barnett & Foster 18	Central School of Pharmacy 4	Denaeyer's Peptone Co. 21	Edwards, W., & Son 34	Evans, Sons & Co. 13, 43, Cover	Goodall, Backhouse & Co. 18	Harveys & Co. 34	Hockin, Wilson & Co. 11	Jewshury & Brown 14	Keith, B., & Co. 40	Levermore, Aug., & Co. 56	London Hospital and Medical School 4	Newberry, F., & Sons 45	Oldfield, Pattison & Co. 3	Pease, Allen & Co. 40	Quilliam, J., & Co. 56	Raphaël, J., & Co. 4	Sander, H. G., & Sons 15	Sanford & Son 56	Self-opening Tin-box Co. 52	Southwell, Chas., & Co. 27	Stokes, G. R., & Co. (Lim.) 52	Watson & Wates 57	Wedgwood, J., & Sons 51	Wileys & Co. 33
Apollinaris, The Co. 19	Barnett, R. H. 44	Chalmers, W. B. 52	Downie, B. J. P., Co. 57	Elliman, Sons & Co. Text 562	Evans, Lescher & Webb, London 13, 43, Cover	Greensill, T. S., & Son 14	Hay, W. 26	Holloway, P. 49	Jewshury & Brown 14	Kilner Bros. 45	Levy, Julius 40	Luneberger Wax Bleaching Works 57	Mason, W. B. 51	Mumford, Sir James, & Son 28	Petersen, P. J., & Co. 38	Quilliam, J., & Co. 56	Raphaël, J., & Co. 4	Sanger & Sons 10	Sanger & Sons 10	Shirley, A. W. 53	Silicated Carbon Filter Co. 26	Silverlock, H. 12	Soul, W. H., & Co. 36	Wright, W. V., & Co. 30	Zimmermann, A. & M. 32
Anstun & Co. 52	Barnett, R. H. 44	City School of Pharmacy 4	Dukes, B. 6	Employers' Liability Assurance Corporation (Lim.) 6	Fitzgerald, W. C. 38	Fuerst Bros. 40	Haynes & Co. 56	Holroyd, J., & Co. (Lim.) 48	Jewshury & Brown 14	Knight & Co. 46	Levermore, Aug., & Co. 56	May & Baker Cover	Marion & Co. 30	Murray, Sir James, & Son 28	Phillips, G., & Co. 57	Quilliam, J., & Co. 56	Raphaël, J., & Co. 4	Scholar & Sinsky 50	Seahury & Johnson 15, 51	Self-opening Tin-box Co. 52	Shirley, A. W. 53	Silicated Carbon Filter Co. 26	Silverlock, H. 12	Wright, W. V., & Co. 30	Zimmermann, A. & M. 32
Australian Drug Co. 36	Barnett, R. H. 44	Clark, S., & Co. 48	Durrant, G. 56	Edwards, W., & Son 34	Felton, Grimwade & Co. 38	Fuerst Bros. 40	Haynes & Co. 56	Holroyd, J., & Co. (Lim.) 48	Jewshury & Brown 14	Kilner Bros. 45	Levermore, Aug., & Co. 56	May & Baker Cover	Marion & Co. 30	Murray, Sir James, & Son 28	Phillips, G., & Co. 57	Quilliam, J., & Co. 56	Raphaël, J., & Co. 4	Scholar & Sinsky 50	Seahury & Johnson 15, 51	Self-opening Tin-box Co. 52	Shirley, A. W. 53	Silicated Carbon Filter Co. 26	Silverlock, H. 12	Wright, W. V., & Co. 30	Zimmermann, A. & M. 32
Australian Meat Co. 21	Barnett, R. H. 44	Cooking & Co. 39	Durrant, G. 56	Edwards, W., & Son 34	Felton, Grimwade & Co. 38	Fuerst Bros. 40	Haynes & Co. 56	Holroyd, J., & Co. (Lim.) 48	Jewshury & Brown 14	Kilner Bros. 45	Levermore, Aug., & Co. 56	May & Baker Cover	Marion & Co. 30	Murray, Sir James, & Son 28	Phillips, G., & Co. 57	Quilliam, J., & Co. 56	Raphaël, J., & Co. 4	Scholar & Sinsky 50	Seahury & Johnson 15, 51	Self-opening Tin-box Co. 52	Shirley, A. W. 53	Silicated Carbon Filter Co. 26	Silverlock, H. 12	Wright, W. V., & Co. 30	Zimmermann, A. & M. 32

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Dunn and Co.
Fuerst Bros.
Morris and Callard (Salts)

ALKALOIDS

Howards and Sons (Cinchona)
Smith, T. and H.

AGNCIES ABROAD

Australian Drug Co.
Cocking and Co. (Japan)
Felton, Grimwade and Co.
(Melbourne)
Fitzgerald, W. C.
Fougers and Co. (New York)
Kempthorne, Prosser & Co. N.Z.
Lennon, B. G., and Co.
Levy, Jules
Peake, Allen and Co.
Petersen, P. J., and Co.
Prosser, Taylor and Co.
Rich, E. C., Co.
Roberts (Paris, &c.)
Rooke, Tompsitt and Co. (Mel-
bourne)
Soul, W. H., and Co.

ALMANACKS

Blake and Mackenzie
Davis, J., and Co., Lim.
Silverlock, H.
Townsend, J.

AMMONIA

May and Baker.
White, A., and Sons
Woolley, Sons and Co.

APPARATUS

Becker, F. E., and Co.
(Scientific)
Clarke, S. (Food Warmer and
Bed Tray)
French Nickel Manufacturing
Co.
Orme (Scientific)
Perken, Son and Bayment
Stokes, G. R., and Co. (Lim.)
(Check Till)
Tebbutt, F.
Wedgwood & Sons (Mortars)

BAKING POWDER

Dunn, W. G., and Co.
Goodall, Backhouse & Co.

BANDAGES

Bailey, W. H., and Son
Robinson and Sons
Schulze, F., and Co.
Seabury and Johnson

BEESWAX

Bowdlear, W. H., and Co.
Luneberger Wax Bleaching
Works

BICARB. SODA

Brunner, Mond and Co., Lim.
Howards and Sons
May and Baker

BISMUTH, PREP.

Hearn, Squire and Francis
Hewlett and Sons
Howards and Sons
May and Baker
Symes and Co.
White, Alfred, and Sons

BLOOD MIXTURE

Lincoln and Midland Counties
Drug Co.

BOOKS

Black and Son
Davis, J.
Gibbons, F., and E.
Gurney and Jackson
Hargreaves, Dr.
Lewis, H. K.
Whitby, W. M.D.

BOTANIC BEER

Newhall and Mason

BOTTLES

Aire and Calder Bottle Co. (Ld.)
Bailey, M., and Co.
Barnett and Foster
Barrett, E. H.
Brady and Hinchliffe
Brett's (Lim.)
Evans, Sons and Co.
Hearn, E. A., and Co.
Hunt, W. F. (Caps)
Isaacs and Co.
Kilner Bros.
Maw, Son and Thompson
Poths, H., and Co.
Sanders, H. G., and Son
Shirley, A. W.
Taylor, B., and Co.
Toogood
Youldon, E.

BOXES

Austin and Co. (Cardboard)
Ayton and Saunders
Chalmers, W. B.
Noakes, E., and Co.
Owen, J., Jr.
Parmenter, I. W., & Co. Lim.
Robinson and Sons
Self Opening Tin Box Co.

BRUSHES

Dukes and Co.
Moseley, David, and Sons
Sutton, O., and Co. (Tooth)

BUTTER COLR, &c.

Johnsen and Jurgensen
Oldfield, Pattison and Co.
Tomlinson and Hayward

CAMPHOR

Fuerst Bros.
Howards and Sons
Keene and Ashwell (Homeo-
May and Baker (pathtic)

CAPSULES

Denoual, J. (Medicinal)
Duncan, Flockhart and Co.
Evans, Sons and Co.
Hooper, E., and Co.
Maw, S., Son and Thompson
Robertson, J., and Co.

CAPSULES

(METALLIC)

Betts and Co.
Melin, C. (Machize)
Sanders, H. G., and Son

CARMINE

Bush, W. J., and Co.

CSCRA SAGRADA

Duncan, Flockhart and Co.
Evans, Sons and Co.
Fuerst Bros.
Moss, J., and Co.
Squire and Sons

CASTOR OIL

Fuerst Bros.

CATALOGUE

Evans, Sons and Co.
Maw, Son and Thompson
May, Roberts and Co.
Sanger and Son
Schultz, F., and Co.
Thompson, Walters, Hole and
Co. (Limited)

CEMENT

Fonlkes, W. J.
Kay Bros., Lim
Mumford, E.

CHALK PRECIP.

Dunn and Co.
Levermore, Aug., and Co.
White, A., and Sons.

CHEMICALS

Andreas, Oscar and Co.
Boehm, F.
Brannwell and Son
Brunner, Mond and Co., Lim.
Bush, W. S. and Co.
Dunn and Co.
Fletcher Fletcher and Stevenson
Goodall, Backhouse and Co.
Hill, A. S., and Son
Howards and Son (Pharm.)
Kuhn, B.
Levermore, Aug., and Co.
Lothouse and Saltmer
May and Baker
Morris and Callard
Moss and Co.
Prunk, Davis and Co.
Stern, G. and G. (Fumeline)
Smith, T. and H., and Co.
Type and King
White, A., and Sons
Zimmermann, A. and M.

CHEST PROTECTORS

Bailey, W. H., and Son
Evans, Sons and Co.
Hockin, Wilson and Co.
Liverpool Lint Co.
Lynch and Co.
Maw, Son & Thompson, S.
Sanger and Sons
Schutze, F., and Co.
Thompson, Walters, Hole and Co. (Limited)
Wood, Vincent

CHLORIDE OF GOLD

Rowland, L.
Möller, P.

CHL. OF POTASH

Burroughs, Wellcome and Co.
Hooper, B., and Co.

CHLORIDE OF LIME

Government Sanitary Co.
National Chemical Co.

CHLORODYNE

Davenport (Brown's)
Freeman, R.
Towle, A. P., and Son

CHLOROFORM, &c.

Duncan, Flockhart and Co.
Macfarlan, J. F., and Son
Smith, T. and H., and Co.
Wright, Layman and Umney
Zimmermann, A., and Son

CITRIC ACID

Hasall (Phospho)

COCAINE-HYDRO.

Howards and Sons

COCA WINE

Armbricht, Nelson and Co.
Evans, Sons and Co.
French Hygienic Soc.

COCOA & CHOCOLATE

Cadbury Bros
Fry and Sons
Rowntree and Co.
Scheffler Bros. and Co.
Van Houten's Cocoa

COD-LIVER OIL

Allen and Hanbury
Brekke and Howld
Burroughs, Wellcome and Co.
Evans, Sons and Co.
Hill, A. S., and Son
Lothouse and Saltmer
Oppenheimer Bros. and Co.
Smith, T. J.
Woolley, Sons and Co.
Wright, Layman and Umney

COFFEE

Symington and Co. (Coffee Essence)

COSSIBLE TUBES

Betts and Co.
Brooks, Peel and Co.
Sanders, H. G., and Son

COMPRESSED

Medicines

Allen and Hanbury
Blyton, T. Bage, and Co.
Burronghe, Wellcome and Co.
Fuerst Bros.
Hooper, B., and Co.
Leo and Co.
Wyleys and Co.

CONFECTIONERY

Blyton, T. Bage, and Co.
Ghison, R., and Sons
Kerfoot, T.
Pascall, J.
Warriock Brothers

CONCENT. LIQS.

Evans, Sons and Co.
Fletcher, Fletcher & Stevenson

CORN CURES

Maw, Son and Thompson, S.
Robinson, B.
Seabury & Johnson (Plasters)
Solporth Bros. (Plasters)
Thompson, M. F.
Young, H.

COTTON WOOL

Haynes, G., & Co. (Absorbent)
Robinson and Sons (Absorbent)
Sanger, J., and Sons
Seabury and Johnson

CRSED LINSSEED

Mumford, G. S.

DENTIFRICES

Fentiman & Co.
Jewsbury and Brown
Maw, Son and Thompson, S.
Newbery and Sons
Reeh, H.
Sutton, O., and Co.
Thompson and Capper
Warrick Bros.

DISINTEGRATORS

Keode, W. (Areea Nut)
Carter, J. H.

DOG MEDICINES

Spratts (Patent)

DISINFECTANTS

Government Sanitary Co.
Hamilton and Co.
Joyce' Sanitary Compounds
National Chemical Co.
Seabury and Johnson
Sanitas Co.

DRUGGISTS' SUP.

Ayrton and Saunders
Bailey, M., and Co.
Barclay and Sons (Limited)
Evans, Lescher and Webb
Evans, Sons, and Co. (Savars)
Hill, A. S., and Son
Hockin, Wilson and Co.
Irris and Co.
Key Bros, Lim.
Lynch and Co.
Marriot, E., and Co.
Maw, Son and Thompson, S.
May, Roberts and Co.
Sanger and Sons
Schutze and Co.
Thompson, Walters, Hole and Co.
Toogood, W.
Wood, Vincent

DRUMS, CANS, &c.

Noakes and Co.

DYES

Prunk, Davis and Co.

EAU DE COLOGNE

Farina, J. M.
Shirley, A. W.

EFFERVESCENT

Allen and Hanbury

ELECTRIC APPAR.

Darton, F., and Co.
Gent and Co.
Orme and Co.

EMEROCATION

Clark, W.
Elliman, Sons and Co.

ENEMAS

Bailey, W. H., and Son
Ingram and Son
Lynch and Co.
Maw, Son and Thompson, S.
Sanger and Son
Schutze, F., and Co.

ENGRAVERS

Barker, W., and Son
Corsan, J. H. (Glasses)
Harris, A. J. (Glasses)

ESSENTIAL OILS

Boehm, F.
Bush, W., Son and Co.
Cooking (Japan Peppermint)
Cummock, J.
Duckworth and Co.
Evans, Sons and Co.
May and Baker
Stevenson and Howell
Symes and Co.
Treat, R. C.
Warrick Brothers
Wright, Layman and Umney
Vogt, G.

ESSENCES

Beckett, W.
Boehm, F.
Bratby and Hinchliffe
Burgoyne, Burdighes and Co.
Bush, W. J. and Co.
Cummock, J.
Duckworth and Co.
Goodall, Backhouse and Co.
Hay, W.
Idris and Co.
May and Baker
Oldfield, Pattinson and Co.
Southwell, C., and Co.
Stevenson and Howell
Tyrer, P. (Anchovies)
Woolley, Sons and Co.

ETHER

Duncan, Flockhart and Co.
Howards and Son
May and Baker
Robbins
White, A., and Sons
Woolley, Sons and Co.
Wright, Layman and Umney

EUCALYPTUS

Downie B. I. P. Co.
Tucker, J., and Co.

EXTRACTS, FLUID

Allen and Hanbury
Barber, G., and Co.
Burgoyne, Burdighes and Co.
Evans, Sons and Co.
Fletcher, Fletcher & Stevenson
Hearon, Squire and Francis
Hooper, B., and Co.
Moss and Co.
Oldfield, Pattinson and Co.
Potter & Clarke
Wright, Layman and Umney

EXTRACT, MEAT

Anstralian Meat Co.
Bovril (Limited)

FLY PAPERS

Brand and Co.
Denney's Peptone Co.
Liebig Co.

FLESH GLOVES

Solporth Bros.

FEEDING BOTTLS

Breffits, E. and Co., Lim.
Evans, Sons and Co.
Hearn, B. A., and Co.
Hockin, Wilson and Co.
Kilner Bros.
Maw, Son and Thompson, S.
Marriot, E., and Co.
May, Roberts and Co.
Thompson, Walters, Hole and Co. (Limited)
Toogood, W.

FLY PAPERS

Ford, Shanland and Co.
Mather, W.

FILTERING

Andrews, R. W.
Doulton and Co.
Mawson, Swan and Weddell
Silitated Carbon Filter Co.

FOOD (Infants & Invalids)

Allen and Hanbury
Benger's Panchristed
Bovril (Limited)
Brand and Co.
Bragg, J. L. (Charcol Biscuits)
Dahl's Dyspepsia Cakes
Goodall, Backhouse and Co.
Hearon, Squire (Malted)
King, F., and Co., Lim.
Liebig Co.
Mottershead & Co. (Benger's)
Nestle, H. (Food)

FORMULAE

Brooks, T.

GINGER ALE

Hay, W. (Essence)
Kinnmond and Co.
Mille, R. M., and Co.

GLYCERINE

Pink and Co.
Fuerst Bros.
Friede Candle Co.
Van Geelkerken and Co.

GRANULAR PREP.

Burroughs, Wellcome and Co.
Curtie and Co.
Evans, Sons and Co.
Hearon, Squire and Francis
Hill, A. S., and Son
Kerfoot, T.
Wright, Layman and Umney

GUM

Pink (Arabic, &c.)
Hyde, Nash and Co.
Knight and Co.
Levermore Aug., and Co.
Prunk, Davis and Co.

GUTTAPECHA

Duncan, Flockhart and Co.

HAIR PREP.

Brodie, J. (Imperial Hair Dye)
Cheesebrough Mfg. Co.
Quelch, H. C.
Truett, H. P. (Limited)

HERB BEER EXTS

Newhall and Mason
Oldfield, Pattinson and Co.
Potter and Clarke

HERBALISTS

Butler, McCulloch and Co.
Newhall and Mason (Extract of Herbs)
Potter and Clarke (Extract of Herbs)
Wilkinson, A., and Sons (Compressed Hope)

HOMOEOPATHIC

Butcher, W., and Co.
Epps, J., and Co.
Gould, E. and Son
Kearse and Ashwell
Leath and Ross
Thompson and Capper
Watson and Wates

HOPS

Wilkinson, A., and Sons

HOP ALE ESSENCE

Hay, W.

HYPOPHOSPHITES

Duncan, Flockhart and Co.
Dunn and Co.
Fellows
Fletcher, Fletcher and Co.
Symes and Co.
Type and King

HOSPITALS

Bollingbroke House
London Homoeopathic

INEALERS

Anderson and Adams
Evans Sons and Co.
Godfrey and Cooke
Hockin, Wilson and Co.
Maw, Son and Thompson, S.
Toogood, W.

INSECTICIDES

Maw, Son and Thompson, S.
Sanford
Went and Co.
Vogt, G.

INK [See MARKING]

Bewley and Draper
Duncan, Flockhart and Co.

JELLIES (TABLE)

Southwell, C., and Co.

KETCHUP

Tyrer, P.

LAMPS

The Wenham Co. (Limited)

LARD

Ewen J.

LEECHES

Fitch and Nottingham
Potter and Clarke

LIME JUICE

Evans, Sons and Co.
Idris and Co.
Hockin, Wilson and Co.
Southwell, C., and Co.

LINT

Liverpool Lint Co.
Maw, Son and Thompson, S.
Newsome, C.
Robinson and Sons
Seabury and Johnson

LOZENGES

Allen and Hanbury
Blyton, T. Bage, and Co.
Ghison, R., and Sons (Manfrs.)
Hill and Son
Kerfoot, T.
Martindale, W.
Pascall, J.
Raines and Co.
R. (Keeper's)
Warrick Bros.

MACHINERY

Burroughs, Wellcome and Co.
Carter, J. H.
Goodall, E. F.
Holroyd & Co. (Limited)
McFerran, J. A.
Melin, C. (Capauling)
Pontifex and Wood
Werner and Pfeleiderer

MAGNESIA

Andreas, Oscar, and Co.
Brsh, W., Son and Co.
Dinneford
Henry, T. and W. (Caloined)
Hill and Sons, A. S.
Kerfoot, T. (Glycerate)
Murray, Sir James, and Son

MALT EXTRACT, &c.

Burroughs, Wellcome and Co.
Hearon, Squire and Francis
Hockin, Wilson & Co.
Oppenheimer Bros. and Co.

MARKING INKS

Barber, G., and Co. (Orimson)
Hickinson, J.

MEDICINE CHESTS

Day, Son and Hewitt (Veterinary)
Day and Sons (Veterinary)

MENTHOL

A1 Menthol Depot, A. W.
Shirley, Proprietor
Cooking and Co.
Hockin, Wilson and Co.
Maw, Son and Thompson, S.
Shirley, A. W.

MERCURIALS

Howards and Sons
May and Baker

METHYLATED

Spirits

METHYLENE

Robbins, J., and Co.

MICROSCOPES

Derton, F., and Co.
Perken, Son and Rayment

MILK

Nestle, H. (Condensed)
Swiss Milk Co.

MIXING

Machinery

Bracher and Co.
Carter, J. H.
Werner and Pfeleiderer

MORPHIA

Macfarlan, J. F., and Co.
Smith, T. and H.

MUSTARD

Johnson, J. H. and S. (Ess. Oil)

OILS, PAINTS, &c.

Anglo-American Oil Co. (Lim.)
Colthurst and Harding
Fox, W., and Sons
Prunk, Davis and Co.

OPTICIANS

Darton, F., and Co.
Perken, Son and Rayment
Raphael, J., and Co.

POINTMENT BASES

Albert and Co.
Burroughs, Wellcome and Co.
Cheesebrough (Vaseline)
Green, S. (Single-use Eye)
Grindley (Petroleum Jelly)

OTTO OF ROSE

Fuerst Bros.
Shipoff and Co.
Treat, R. C.

PAPAIN FINKLER

Kuhn, B.

PEPSINE, &c.

Burroughs, Wellcome and Co.
Claridge and Co.
Fletcher, Fletcher & Stevenson
Newbery (Inglavin)
Warner and Co. (Inglavin)
Zimmermann

PARALDEHYDE

Zimmermann, A. and M.

PATENT AGENTS

Dukes, B.
Horn and Son

PATENT MEDCNS

Alofas Co.
Albert and Co.
Armbricht, Nelson and Co.
Atkinson and Barber (Infant)
Preery

LINT

Barolay and Sons (Limited)
Beecham (Pills)
Beedler, J., and Co.
Crouch, F. B. (Waters)
Dahl's Dyspepsia Cakes
Edwards and Son
Evans, Lescher and Webb
Fitzgerald's (Padders)
Goodall, Backhouse and Co.
Holloway (Pills and Oint.)
John's Liver Pills
Kemp, W. H.
Knaples Cure
Lator (Phosphodyne, &c.)
Lincoln (Clarke's Mix.)
Mason, W. B.
May, Roberts and Co.
Mentholine Manufacturing Co.
Newbery and Sons.
Oil of Olive Co.
Powell, A. E. and Co. (Moonseed Bitters)
Redmond's Stomach Wash
Richards, J. M.
Roberts and Co. (Foreign)
Sequal (Limited)
Stedman, J. (Feething Pwdrs)
Swift's Specific Co.
Wilson, A. (Butter's Nerveine)

PERFUMERY,

FANCY SOAPS

Blondeau and Co.
Brecknell, Turner and Sons
Burroughs, Wellcome and Co.
Cheesebrough Manufacturing Co.
Chiswick Soap Co.
Cook, E., and Co.
Coward and Co.
Dee Oil Co. (Limited)
Durrant, Geo.
Evans, Sons & Co. (Fossoline)
Ewen (Soaps)
Farina, J. M.
Ferguson, W. K.
Foukies, W. J.
Giraud (Fils)
Greensill, T. S., and Son
Johnson and Co.
Mack, H.
Mann, C. A., and Co.
May, Son and Thompson, S.
Mouilla Liquid Soap Co. Lim.
Newbery and Sons (Berdes')
Oftinger, E.
Pearce Soap
Perke and Llewellyn
Price's Patent Candle Co.
Rouse & Co.
Sainsbury, S. (Lav. Water)
Shipkoff and Co.
Shirley, A. W.
Thompson, Walters, Hole and Co. (Limited)
Travado, S., and Co.
Treat, R. C.
Truett, H. P. (Limited)
Vigels, L.
Violet
Warrick Brothers
Wedlake, M.
West, T. (Ocell's Monas)
Woolley, Sons & Co. (Powder)

PETROLEUM

Anglo-American Oil Co. (Lim.)

PEPPERMINT OIL

Cocking and Co.

PEROX. OF HYDR

Dunn and Co.
Robbins and Co.

PHARM. PREPS.

Allen and Hanbury
Barron, Squire and Co.
Becker and Kirsten
Billault
Boehm, F.
Brady and Martin
Burgoyne, Burdighes
Burroughs, Wellcome & Co.
Chanteaud, G.
Chassaing and Co.
Dee Oil Co. (Lim.) (Petrolia)
Duncan, Flockhart and Co.
Ferris and Co.
Fletcher (Liqrs. for Syrups)
Hearon, Squire and Francis
Hewlett and Son
Hill, A. S., and Son
Hooper, B., and Co.
Howards and Sons
Keith (Onc. Tinctures)
May and Baker (Phenacetine)
Marlin and Bolland
Roberts and Co., Vinolia &c.
Symes and Co.
Tucker, J., and Co.
White, Alfred, and Sons
Willows, Francis and Butler
Woolley, Sons and Co.
Wyleys (Various)

PHOTOGRAPHIC

Botwright and Grey
Howards and Son (Chemicals)
Fry and Co. (Limited)
Marion and Co.
May and Baker
Orme, J., and Co.
Perken, Son and Rayment
White, Alfred, and Sons

PINE PRODUCTS

Burroughs, Wellcome and Co.
Stern, G. and G.

PILLS (Coated, &c.)

Allen and Hanburys
Beecham, Thomas
Eade's Gout Pills
Evans, Sons and Co.
Holloways
McKesson and Robbins
Newbery and Sons
Penny Quinine
Warner, W. R. (Coated)
Wyleys and Co.

PILL MACHINES

Pindar, J. W.
Robertson, J., & Co. (Coating)
Toogood, W. (Coater)

PLASTERS

Cooper and Co.
Evans, Sons and Co.
Johnson and Johnson
Mather, W.
Quilliam, J., and Co.
St. Dalmas, A. De
Seabury and Johnson
Thompson, M. F.
Young, H.

PODOPHYLLIN, &c.

Keith, R., and Co.
Smith, T. and H.

POLISHING

Bradley & Bourdas (Albatum)
Oakley, John, and Sons
Griffiths, T. M.

PORCELAIN GOODS

Toogood, (E.C. Pote, regist.)

PRINTING

Bowers Bros.
Cyclostyle Co.
Davis, J., and Co. (Limited)
Ford, Shapland and Co.
Silverlock, H.
Townsend, J.

PUMILINE

Stern, G. and G.

QUININE SALTS

Andree, Oscar, and Co.
Howards and Sons
Kuhn, B.
Rivers, Hicks (Penny Quinine)
Zimmermann and Co.

RECIPES

Brooks, T.

RENNET

Dunoon, Flockhart and Co.
Johnson and Jørgensen
Oldfield, Pattinson and Co.

SACCHARIN

Allen and Hanburys
Burroughs, Wellcome and Co.

SALICIN

Macfarlan and Co.
Smith, T. and H., and Co.

SALICYLIC ACID

(Kolbe's)

Fuerst Bros.

SALOL

Kuhn, B.

SAUCES, PICKLES

Goodall, Backhouse and Co.
Tyrer, F.

SCHOOLS, &c.

Bailey and Coates
Bollingbrook House
Central School of Chemistry
and Pharmacy
City School of Chemistry and
Pharmacy (Lim.)
Liverpool School of Pharmacy
London Homoeopathic and
Medical School
Manchester College
Polytechnic Institute
South London School of
Pharmacy, Lim.
The School of Pharmacy
Westminster College

SOAP

Blondeau and Co. (Vinolia)
Chiswick Soap Co.
Cook, E., and Co.
Pears' Soap

SELTZOGENES

Brady and Hinchliffe
Evans, Sons and Co.
Fevre, T.
Gerard, E. and Co.
Idris and Co.
May, Roberts and Co.

SHEEP DIP

Fletcher, Bros. and Co.
Tomlinson and Hayward

SHOP FITTERS

Bowling and Govier
Bygrave, J. and W.
Gorsan, J. R.
Evans, Sons and Co.
Howlett, S.
Natali, E. (Show Cases)
Potts, H., and Co.
Treble, G., and Son
Yates, W. S.

SPIRIT

Burrough (Pure and Methyl.)
Harvey, J. W., and Co.
Jones and Co. (Methyl.)
Leslie, J., and Co.
Macnair, A., and Co.
Macnair, J. and D., and Co.
Phillips and Co.
Smith, Stephen and Co.

SPONGE

Harris and Co.
Maw, Son & Thompson (Bags)
Peterson M., and Co.

SPECTACLES

Botwright and Grey
Darton, F., and Co.
Raphael and Co.

STAMPS (RUBBER)

Hickiss, J.
Pollard, A. W.

STOPPERS

Anstn and Co. (Sprinklers)
Barnett and Foster (The
Eclipse)
Sanders, H. G., and Son

STOVES

Clark, S. and Co.

SURGICAL

Ayrton and Saunders
Bailey, W. H., and Son
Barclay and Sons (Limited)
Cooking, J. T.
Eschmann Bros. and Walsh
Haywood, J. H.
Ingram and Son
Liverpool Patent Lint Co.
Milne, J.
Robinson and Sons
Schutze, F., and Co.
Thompson, Walters, Hole and
Co. (Limited)
Wood, Vincent
Woolley, Sons and Co.

STARCH

Critchley (Gloss)

SUGAR

Gibson, R., and Sons

SULFONAL

Burroughs, Wellcome and Co.
May and Baker

SYMPHONS

Barnett and Foster
Brady and Hinchliffe
Favarger and Co.
Fevre, T.
Kilner Bros.
Melin, C.

SYRUPS

Fletcher, Fletcher (Liquors)
Idris and Co.

TARTARIC ACID

Andree, Oscar and Co.

TEETHING PADS

Marriot, E., and Co.

TILL

Stokes, G. E. & Co. (Lim.)
TIN CANISTERS
Noakes, B., and Co.

TEA

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Hopgood and Co.
Mack, H.
Mumford, G. S.
Queich, H. C.
Simon, J.
Travado, S., and Co.
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Vigis, L.

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Maw, Son and Thompson, S.
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Jasmin				
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ARE GUARANTEED TO BE THE FINEST IN THE MARKET

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A Pure Essence of the Finest Ginger.
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For First Quality Ginger Ale.
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For Second Quality Ginger Ale.
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This Essence makes a beverage that is unsurpassed by the so-called finest Belfast Ginger Ale.
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For the manufacture of the Finest Aerated Hop Ale. This Essence is made from the choicest Hops grown, and is unrivalled for its peculiarly fine Hop Flavour and Aroma. Hop Ale made from this Essence has the full flavour of the finest Hops, and is a really appetising Bitter Beer.
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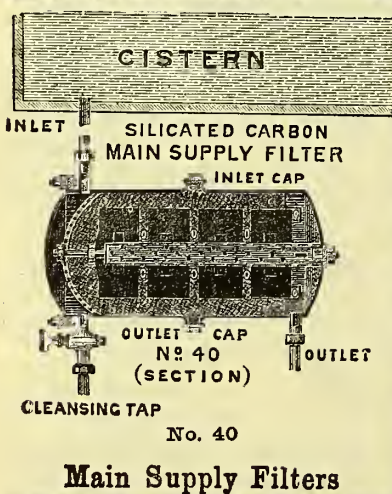
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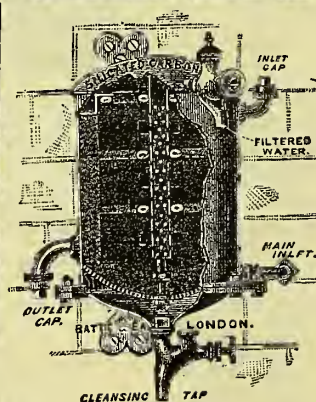
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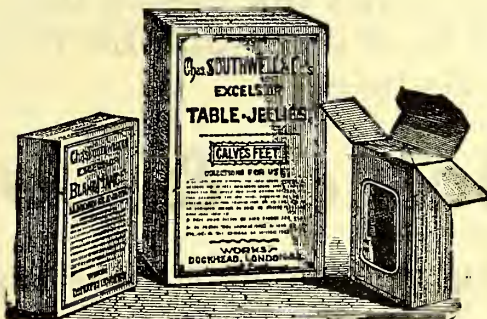
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PAPAIN (FINKLER).

NOTICE.

As duly notified by their circular of the 15th August, 1889, Messrs. Dr. Finkler & Co., of Godramstein (Palatinate), have on that date arranged with Mr. B. Kühn, 36 St. Mary-at-Hill, London, to take over their whole production of PAPAÏN. In order to closely identify their firm with the product a slight modification has taken place in their original label, the new label being headed PAPAÏN (Dr. Finkler & Co.), followed in red ink by—Sole Depôt for Wholesale and Export Trade, B. KÜHN, 36 St. Mary-at-Hill, LONDON.

The rest of the label remains the same.

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{ MEDICAL
PRESS AND
CIRCULAR.

LONDON.]

OCTOBER 19TH.

[1889.]

Extractum Malti—Kepler.

THE BEST MALT FOOD.

The KEPLER EXTRACT OF MALT contains all the valuable digestive, demulcent, nourishing and vitalizing properties of the best Barley Malt, viz. :—

DIASTASE.—The powerful digestive of starchy matters; of great service in indigestion, and acid dyspepsia.

DEXTRENE.—A valuable demulcent, very useful in coughs, bronchitis and lung affections, also most soothing and healing to the intestinal tract in cases of diarrhoea, dysentery, &c.

MALT SUGAR, which is the most readily digestible of all foods, and is not liable to acetous fermentation as is the case with cane sugar.

PHOSPHATES OF LIME, SODA and POTASH, nature's vitalised phosphates, which from the fact of their having passed through a living plant are more soluble and readily assimilated than the same salts chemically prepared. These grain phosphates are of the greatest service in building up the bony tissues, and in imparting vitality to the brain. They greatly facilitate the union of broken bones, and hence are of much value in surgical cases, also in rickets, scrofula, nervous debility, &c.

The Kepler Extract of Malt, and the Kepler Solution of Cod Liver Oil in Extract of Malt, are fitly described as complete foods in themselves, but they are also powerful aids to the digestion of other foods. The Extract of Malt is also a solvent of the most assimilable of all fats—Cod Liver Oil.

When the Kepler Extract is added to cows' milk it prevents the heavy clot which even the calf cannot digest without regurgitation and chewing. The Extract thus renders the milk easily digestible by invalids in fevers and dyspepsia; it is also an excellent substitute for mothers' milk. For this purpose a teaspoonful may be added to $\frac{1}{4}$ pint of milk, diluted with a teaspoonful of water, or aerated water; a few grains of Bicarbonate of Soda may also be added to counteract the acidity usually present in milk as supplied. The Extract supplies the deficiency of sugar in cows' milk, and makes it more agreeable in flavour, especially to the taste of infants and children.

The Kepler Extract of Barley-Malt enjoys universal precedence over all other preparations. The wonderful malting powers of barley, its richness in nutritive materials and diastase, and our improved modes of manufacturing, render the Kepler Malt Extract for taste, digestibility and restorative powers absolutely unrivalled. To attempt to displace it with preparations of inferior mixed cereals seems like trying to depose breast milk and enthrone cows' milk in its place.

The proof of this preparation is in the eating. The following words were expressed by an eminent authority, and they furnish an example of the thousands of successes medical men have gained with the Kepler Extract—"I had a patient awhile ago whom nothing seemed to nourish; I tried various prepared-foods, including some extracts of malt, but all to no purpose; finally I prescribed Kepler Extract of Malt; the patient liked it immensely, and from that day increased in weight and recovered."

The deficiency of oil in cows' milk may be made good by using the Kepler Solution of Cod Liver Oil, instead of the Kepler Extract of Malt. The Extract and Solution are both admirable regulators of the bowels, serviceable alike in diarrhoea and in constipation. A large dose acts as a mild aperient if taken in warm water after meals. They are also very soothing in irritated conditions of the mucous membrane. They both nourish every part of the body, and are as wholesome as they are harmless. The Extract of Malt is regarded by many medical men as being quite as useful in consumption and wasting diseases as Cod Liver Oil, while possessing the very important advantage of being quite agreeable in flavour.

As Cod Liver Oil is an aid to the digestion of other foods as well as a valuable alternative and nutrient, the combination in the form of the Kepler Solution is singularly desirable and fortunate.

The demand for Extract of Malt and Extract of Malt with Cod Liver Oil having been chiefly created by the good quality of the Kepler products, Physicians and Chemists are specially requested when prescribing or ordering to specify Kepler, and thus to obtain the best articles at fair prices.

The *Lancet* reports:—"Kepler's is the best known, and in this country the largest used Extract of Malt. It is as distinct an advance in therapeutics as was the introduction of cod liver oil. It is one of the best remedies for atonic dyspepsia, and is undoubtedly useful in consumption and other wasting diseases."

The *British Medical Journal* reports:—"We can recommend the Kepler Malt Extract. Being prepared at a very low temperature, its qualities are not deteriorated or its flavour spoiled. It is very favourably spoken of by physicians both in respect to its nutritive and digestive properties and as being of very agreeable flavour." "*An ideal form for the administration of fat.*"

The *Medical Press and Circular* says:—"Very delicious to the taste, and has been found by analysis to be exceedingly rich in diastase."

The *Medical Times and Gazette* says:—"By far the best—the one most widely known and most largely used in this country."

The Kepler Extract of Malt and the Kepler Extract of Malt with Cod Liver Oil (Kepler Solution) supplied to the trade in bottles, containing $\frac{3}{4}$ lb. and $1\frac{1}{2}$ lb., at 22s. and 38s. per dozen. Retail prices, 2s. 6d. and 4s. Special terms to Hospitals. Supplied by all Chemists throughout the World.

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ABOVE PRICES SUBJECT TO USUAL DISCOUNT.

Points Worth Noting.

UNGUENTUM LANOLINI (Lanoline Ointment Base) ought always to be dispensed when prescribed.

UNGUENTUM LANOLINI (Lanoline Ointment Base).—Lanoline (Liebreich) diluted with Paraffinum Liquidum forms the most suitable basis for ointments on account of its non-sticky nature.

UNGUENTUM LANOLINI (Lanoline Ointment Base) is perfectly miscible with water and never turns rancid.

Lanoline Ointment Base (Ung. Lanolini) supplied to the Trade at 2s. 2d. per lb. Anhydrous Lanoline Ointment Base, 2s. 10d. per lb. Lanoline (Liebreich), 2s. 8d. per lb. Lanoline (Anhydrous), 3s. 4d. per lb. Ceresin, 1s. 6d. per lb. Paraffinum Liquidum, 1s. per lb. (packages extra). Above prices subject to usual discount.

A Pamphlet on the "Place of Lanoline in Pharmacy" will be sent post free to any Chemist on request.

BURROUGHS, WELLCOME & CO., SNOW HILL BUILDINGS, LONDON, E.C.

See Recommendatory Notice of Medical Press and Opinions of the leading Dermatologists.

WRIGHT'S

Extract from the Proceedings of the Royal Society of Edinburgh:—"Experiments on the Chief Disinfectants of Commerce, with a view of ascertaining their power of destroying the spores of the 'Anthrax Bacillus,' by a Medical Officer of Health and Public Analyst. A 10 per cent. solution of Liquor Carbonis Detergens, acting for four hours, distinctly retarded growth of Anthrax, for the spores, whether in gelatin-pork or in the broth, did not commence developing for 24 hours. Undiluted Liquor 'Carbonis Detergens,' acting for four hours, arrested future growth."

Detergens, acting for four hours, arrested future growth."

Of all Druggists, Wholesale and Retail, throughout Great Britain, Ireland, and Colonies.

LIQUOR

From the *Lancet*, Dec. 22, 1886:—"In our hands it has been a most effective agent in skin diseases, especially of the chronic eczematous class, and one class of psoriasis which had resisted all other kinds of treatment speedily got well under the application of the *Liquor Carbonis Detergens*. We esteem it a very valuable addition to our list of skin remedies."

871:—"We have tested it, and can affirm its value as a detergent agent. We consider the Liquor is an article of great utility."

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The *Practitioner* of September, 1881:—"Eczema connected with varicose veins of the leg—also Pruritus Scroti, Labiorum, and Ani—is best relieved by weak tarry lotions, one of the best of which is *Wright's Liquor Carbonis Detergens*."

P. McLEOD, Colonel R.A., Inspector-General of Ordnance, Ordnance Office Madras, writes Sept. 10, 1887:—"I can certify that 'Liquor Carbonis Detergens,' has cured me of a Psoriasis of 21 years, incurred in Burmah, after every effort of such an able skin doctor as Sir Erasmus Wilson had failed."

From the *Medical Times and Gazette* Jan. 19, 1867:—"We have more than once called attention to the value of this remedy in chronic eczema."

From the *British Medical Journal*, Sept. 22



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For Australasian subscribers the subsidiary journal, THE CHEMIST AND DRUGGIST OF AUSTRALASIA, is included.

Literary Contents.

PAGE	PAGE
Canadian Notes	Editorial Notes— <i>cont.</i>
Corner for Students	The U. S. P.
Correspondence:—	Fire at Burroughs, Wellcome &
Patients at the Pasteur Insti-	Co.'s Factory
tute; Mr. Blunt's Process;	French Pharmaceutical News
The Title "Wind Pills" ..	Gazette
573	General and Provincial News..
Methylated Spirit and Ex-	Leaderettes
ternal Preparations; The	Legal Reports
Paris Awards; Dental Edu-	Marriages
cation, &c.	Metropolitan Reports
574	New Company
Milk of Cucumbers; Per-	Paris Exhibition?
fumery Formule, &c.	In the Machinery Gallery ..
575	In the Chemical Court
Dispensing Notes	569
Legal Queries	Personalities
576	Pharmaceutical Society of Ire-
Miscellaneous Inquiries	land: Annual Meeting
576	555
Deaths	Provincial Reports
567	Trade-marks applied for
Deeds of Arrangement	563
554	Trade Notes
Editorial Notes:—	561
Railway Rates for Carriage of	Trade Report
Goods	558
562	Window Display
The Unqualified Assistant	554
Question	
563	
More about Essential Oils ..	
564	

THE PARIS EXHIBITION.—Our office in the Paris Exhibition is No. 9, the British Section of the Liberal Arts Gallery, where subscriptions can be paid or single copies purchased by persons connected with the drug trade. Our representative there, Mr. Lord, speaks French fluently, and will be pleased to render any assistance in his power to readers of THE CHEMIST AND DRUGGIST.

WE have pleasure in announcing to Continental subscribers that henceforth, by arrangement with the post offices of the various countries, subscriptions to THE CHEMIST AND DRUGGIST can be paid at any post office in Austria-Hungary, Belgium, Denmark, Germany, Holland, Norway, Russia, and Sweden at our rates, namely 10s. per annum including postal delivery to subscribers in any of those countries. Subscriptions may date from the first issue of any month.

THE CHEMISTS' AND DRUGGISTS' DIARY, 1890.

THIS will be the twenty-second CHEMISTS' AND DRUGGISTS' DIARY issued by us, and will be

MORE WIDELY CIRCULATED THAN EVER.

The literary contents will compare well with those of any previous DIARY, and will certainly ensure for the work a permanent place on the bookshelves of thousands of chemists. The advertisements comprised in the DIARY have become its most essential feature.

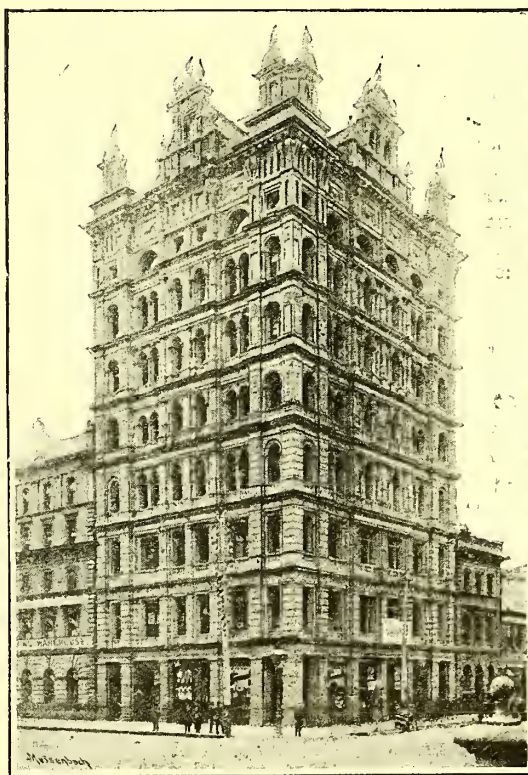
THOUSANDS OF BUYERS

in this country and abroad have come to look upon the book as an encyclopædic reference to the manufacturers and merchants who supply the drug trade; and they turn to it naturally for addresses, information, and quotations. It is not safe to be out of it. But all advertisements for insertion in the forthcoming issue must be in our hands

NEXT WEEK,

as we must close for press on Saturday, October 26, in order to get our Australasian copies ready for despatch by the s.s. *Orient*, which will leave London on November 8.

SUBSCRIBERS' ADDRESSES.—In order to ensure uninterrupted delivery of THE CHEMIST AND DRUGGIST to subscribers who may be changing their address, notice of such change should be received by the Publisher not later than *Monday* of the week in which the journal is to be sent to the new address.



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(corner of Elizabeth and Flinders Streets), where the offices of THE CHEMIST AND DRUGGIST OF AUSTRALASIA are located.

CORNER FOR STUDENTS.

CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

QUALITATIVE ANALYSIS.

A MIXTURE of two salts will again form the subject of the exercise in qualitative analysis. The mixture is to be submitted to a thorough systematic examination, the constituents of the mixture are to be detected, and all other substances proved absent. Students' reports should contain a concise account of the work done, and should include a list of the constituents detected, distinguishing any which may be regarded as accidental impurities.

Students' applications for portions of the mixture will be received up to the morning of next Wednesday, October 23, and the samples will be forwarded immediately.

Students' reports will be received up to Wednesday, November 6.

REPORTS.

The mixture which formed the subject of the last analytical exercise consisted of 1 part of manganese sulphate and 4 parts of potassium nitrate. Its calculated composition was, therefore, as follows:—

Mn	..	..	..	..	..	..	4.56
K	..	..	..	..	..	..	30.89
SO ₄	..	..	..	..	..	..	7.97
NO ₃	..	..	..	..	..	..	49.11
H ₂ O	..	..	..	..	..	..	7.47
							100.00

There were forty reports sent in, and most of them were correct so far as regards naming the constituents of the mixture. Ten students failed to detect manganese, one failed to detect potassium, while in the case of the nitric and sulphuric radicles there were two failures respectively. In some cases the manganese was mistaken for zinc, aluminium, or magnesium; but, on the whole, the reports were unusually good this time, and there is very little to criticize.

The blackening of the mixture when heated in a dry tube gave rise to a difficulty with some of our correspondents, and was attributed by them to the presence of organic matter. Manganese sulphate alone does not behave in this way; it fuses with very little change of colour unless a very high temperature is employed. But the manganese in the mixture had passed into the condition of nitrate, which was readily decomposed on the application of heat, leaving a dark oxide, which coloured the mixed potassium salts nearly black. There are other compounds of manganese, as well as salts of copper, iron, and nickel, which leave a black, or nearly black, residue on being heated. The student must be careful to distinguish between this change of colour and carbonisation. There is usually very little difficulty in recognising the carbonaceous residue that is left by organic substances by the way the mass glows and burns away if there is sufficient access of air.

PRIZES.

The First Prize for the best analysis has been awarded to E. T. WOOD, Messrs. Balkwill & Co., 17 Trafalgar Place, Stoke Damerel, Devonport.

The Second Prize has been awarded to A. P. METCALF, Whitefriargate, Hull.

Marks Awarded for Analyses:

E. T. Wood (1st prize)	..	..	98	J. Morcombe	..	..	82
A. P. Metcalf (2nd prize)	..	..	96	W. G. Longbottom	..	..	80
H. Bowden	..	..	94	Carbon Bisulph	..	..	80
W. L.	..	..	94	A. Howard	..	..	80
Manganese	..	..	92	P. Linctus	..	..	75
A. Shaw	..	..	92	T. Guttridge	..	..	75
J. D. B.	..	..	92	Audi, vide, tace	..	..	75
Ybrik	..	..	92	Albion	..	..	72
A. W. Sikes	..	..	92	Ajax	..	..	70
H. Hamer	..	..	92	F. Roper	..	..	70
E. H. Lee	..	..	90	N. S.	..	..	70
Chirel	..	..	90	G. Lee	..	..	70
Nabob	..	..	90	E. H. Newman	..	..	68
Renrut	..	..	90	Boroglyceride	..	..	68
Squills	..	..	90	A. Lazenby	..	..	65
Jack Frost	..	..	90	Rad. Gent.	..	..	65
Saponis	..	..	88	S. P. S.	..	..	60
Moyhitt	..	..	86	Barium	..	..	60
Silver	..	..	86	F. E. W.	..	..	20
G. W. West	..	..	84	Excursus	..	..	10

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

. All communications should include the names and addresses of the writers.

A. P. METCALF.—The position you have won this time is the best answer we can give to your inquiry.

MANGANESE.—You are not asked to attempt quantitative work. Your calculated composition of the mixture was a long way astray. You assumed that the subject of the analysis was a distinct compound of two salts; it is merely a mixture of two salts in arbitrary quantities.

E. H. LEE.—It is not necessary to employ so many confirmatory tests. For example, you describe seven tests employed to prove the presence of manganese. One or two well-considered tests, adapted to the circumstances of the case, would be quite as conclusive. Calcium sulphate is not really so insoluble as barium sulphate. The quantity of sulphuric radicle in the mixture was insufficient to give a precipitate with a calcium salt, though amply sufficient to precipitate a barium salt.

NABOB.—You were quite right in attributing the blackening to the manganese salt; this behaviour of certain compounds of manganese is not noticed in some of the text-books; it might readily be mistaken for carbonisation.

SAPONIS.—Your results are correct, but your examination of the mixture is not so exhaustive as some others. You do not, for example, extract as much information as might be obtained from the preliminary dry examination. When the substance was heated there was a great deal to be observed besides change of colour. Several other tests calculated to give general information might have been applied before you proceeded with the analysis in the wet way.

W. G. LONGBOTTOM.—A fuller report is required, and the analysis might well be more exhaustive. The colour of the mixture, its solubility, and its general physical characters ought all to be noted and inferences drawn from them.

CARBON BISULPH.—Manganous salts are very like iron salts as regards solubility; the sulphate is readily soluble in water.

P. LINCTUS.—There was not a trace of the acetic radicle in the mixture: it was nitric acid that you volatilised; in applying the ferric chloride test you seem to have employed too much ammonia.

T. GUTTRIDGE.—Your report is confined to proving the detection of four constituents of the mixture, and so far your results are correct, but there is a great deal more to be done: you must show clearly and unmistakably that all other substances are absent.

AUDI, VIDE, TACE.—The behaviour of the mixture when heated did not at all suggest a tartrate; the highly characteristic odour produced by a tartrate when decomposed by heat was entirely absent. We could not obtain a precipitate with calcium chloride even in a strong aqueous solution of the mixture.

ALBION.—The precipitate which you attributed to magnesium was undoubtedly due to the manganese, which you failed to separate as sulphide. It is difficult to say what the cause of this failure was. Possibly you had not added enough ammonia before you passed sulphuretted hydrogen into the solution, or you may have used the latter reagent in insufficient quantity. It is more convenient to use ammonium sulphide under such circumstances.

AJAX.—See remarks to "Albion." The precipitate produced by ammonium sulphide was of a very decided flesh colour by daylight. It is

difficult to understand how you could have performed the operations you mention without producing this precipitate.

N. S.—The solution in which you failed to obtain the precipitate with barium chloride must have been excessively dilute. When 1 part of the mixture of salts was dissolved in 1,000 of water acidulated with hydrochloric acid, the solution gave an immediate and decided precipitate with barium chloride; and even on diluting this solution with 10 parts of water, it still continued to give a precipitate.

F. ROPER.—See remarks to "N. S."

G. LEE.—A portion of the precipitate produced by ammonium sulphide ought to have been fused with sodium carbonate. Had you tried this test you could scarcely have failed to observe the green colour so characteristic of manganese.

E. H. NEWMAN.—Ammonia gave a precipitate in a solution of the mixture even in the presence of ammonium chloride, because a portion of the manganous salt had been oxidised by the nitrate with which it was mixed. The gelatinous precipitate was brown, not white.

BOROLYCEIDE.—See remarks to "G. Lee." The precipitate which you attributed to zinc was due to manganese. You were too easily satisfied that it was zinc that was present.

A. LAZENBY.—It would be difficult to find two salts which would yield a mixture having the composition you assigned to this. If you consider any of the substances detected were impurities, you ought to state so.

RAD. GENT.—Your evidence of the presence of aluminium is weak, as you would doubtless have discovered if you had tried some confirmatory tests. You do not say anything about the supposed magnesium precipitate being crystalline or amorphous. This is an important point.

S. P. S.—There is a great difference between the mere change of colour, which you observed on heating the mixture, and charring. Your report contains very little in support of the conclusion that a tartrate was present.

BARIUM.—See remarks to "S. P. S." If you try heating a small quantity of a tartrate in a dry tube, you will find that the effect produced is very different from what you observed in this case.

F. E. W.—The nitric radicle constituted almost half of the mixture; the omission to detect it was a serious mistake. It is almost incredible that you could have performed the two tests you describe without having observed either the nitrous fumes or the brown ring.

EXCURSUS.—You want some practice with mixtures of known composition, which you can easily prepare for yourself.

Metropolitan Reports.

THE CHEMISTS' ASSISTANTS' ASSOCIATION meets on Thursday next at 103 Great Russell Street, W.C. The paper for the evening will be on "Bacteria," by Mr. F. Davies, B.Sc.

"MASHER" AND "DOCTOR."—Arthur Simcock (23), alias the "Doctor," chemist's assistant, and his young friend the "Masher," have been committed for trial at the Old Bailey on various cash box robbery charges, the particulars of which we have already reported.

A CHEMIST'S RIGHTS.—At the West London Court on Tuesday William McLay (59), described as "a decayed chemist, with no home of his own," was charged with having been abusive towards a chemist at Belgrave Mansions because the latter would not supply him with a lotion free. Mr. Sheil: What have you got to say to all this? Prisoner: Why, that I'm a chemist; that's quite enough. But why do you abuse people who refuse to give you anything? I don't, sir; half of it's falsehoods. Mr. Sheil remanded the prisoner for a week, for inquiries.

ANALYTICAL WORK.—In the Westminster County Court on October 10 the case of Carey v. Innes was before his Honour Judge Bayley. This action was brought to recover 27l. 2s. 8d., balance of account. Mr. Baker, an analytical chemist, who assisted the plaintiff to do the work in respect of which the claim was made, gave evidence on his behalf. The dispute arose in respect of some land at Cambridge, where the defendant was desirous of setting up a cement factory. The defendant (Mr. Arthur Innes) said he employed the plaintiff to survey the ground, and to furnish him with a thorough analytical report of its chemical properties, for which services he agreed to pay 80 guineas and expenses. He had paid the 80 guineas, but as the report, in its present state, was quite useless to him, he did not feel disposed to pay a further sum until it was completed to his satisfaction. It was absolutely necessary, before

doing anything else, to find out what parts the ground contained of silica, alumina, oxide of iron, and magnesia. The plaintiff, in his report, had failed to do this, and the report, in consequence, was useless. If he chose to make it complete, he (defendant) was willing to pay him the balance claimed. His Honour said the plaintiff had been paid 80 guineas for preparing a report which had turned out to be quite useless, and he failed to see that he was entitled to anything more. Judgment would therefore be for the defendant, with costs.

Provincial Reports.

Items of news, and newspapers containing matters of interest to the trade, sent to the Editor will much oblige.

BIRMINGHAM.

A DERITEND chemist had a curious order last week. It was, "Twopennyworth of shot corns to keep lights down; my lights rise so." In the dictionary "lights" mean "lungs," so that the customer's knowledge of physiology was not very great.

In a first-class suburban chemist's shop-window are to be seen four jars containing very fine specimens of cinchona bark, cascara sagrada, peeled and unpeeled colocynth, and bacal fruit. Students of materia medica should take a walk in the direction of Five Ways.

THE atmosphere in Birmingham seems to be saturated with peppermint. In churches, in 'buses, trams, theatres, and in conversation its odour is very evident. Perhaps this is the result of an enterprising chemist having just bought "another four tens for the coming winter."

MR. WM. PRICE, chemist, 152 Bromsgrove Street, has again been appointed an overseer for the parish of Birmingham. He has served in the capacity of a guardian for a number of years. He is assisted in his business of a chemist by a lady, who is reputed to be well up in the science and art of pharmacy.

AN UNQUALIFIED DISPENSER.—An aged pauper was the porter in the dispensary at the Birmingham workhouse, and he occasionally undertook the work of washing out bottles. About a week ago, when the dispenser was going to dinner, the pauper assistant remarked that a simple medicine was required for three old women in the bedridden ward. The dispenser, it is stated, instructed him to make the doses up. Whether he was so instructed or not, he went down to the room in which physic was kept. His idea was to take 2 drachms of Epsom salts, to mix them in an ounce of peppermint-water, and thus make a harmless and useful aperient. Unfortunately, in making his choice between two tubs containing white chemicals, he hit on the wrong one, and instead of getting 2 drachms of Epsom salts he took 2 drachms of a mixture containing equal parts of sulphate of zinc and alum. This mixture is used as an injection. He mixed the sulphate and alum with the peppermint, and the patients having swallowed a dose a serious illness followed. One of the women was very feeble, and the effect was alarming. However, the doctor was able to prevent a fatal termination to the mistake, although for some time the life of one of the patients was in danger. The matter was mentioned in the report of the medical officer, and on Friday of last week it was discussed at a meeting of the workhouse committee. It was brought on before the time fixed for the commencement of the business. On the reporters of the local press entering the meeting at the proper time the discussion on the subject was promptly stopped, and the ordinary business of the meeting proceeded with. The circumstances under which the dispenser in question was appointed are these. At the time when the new infirmary at the workhouse was opened the qualified dispenser was transferred to that institution, and the guardians elected to superintend the dispensing at the old part of the house the gentleman who has been suspended, and who is not a qualified chemist. It may be presumed that they had a right to appoint such a person, inasmuch as the Local Government Board would not have

approved the selection were it not so. An inquiry into the error is to take place, and in the meantime Mr. Richards, a chemist, of Dudley Road, is undertaking the duties of dispenser at the workhouse.

LEICESTER.

LEICESTER AND LEICESTERSHIRE CHEMISTS' ASSOCIATION.—The second annual prize distribution and ball in connection with this association took place on Thursday evening, October 10, at the Masonic Hall. The President (J. G. F. Richardson, Esq., J.P.) occupied the chair, and was supported by the Mayor (Alderman Wood) and the Mayor-elect (Dr. Lankester). The company also included Drs. Bennett, Douglass, Lewitt, Peake, Pope, Mason, and Neale, most of the leading chemists of the town, and a large number of ladies. After a few remarks bearing upon the new botanical garden and the successes achieved by the students, the President presented the prizes as follows:—Chemistry of the Pharmacopœia: Mr. B. Lewitt and Mr. A. P. Eldred. Practical Chemistry: Mr. F. O. Beale and Mr. W. G. Kinton. Botany: Messrs. B. Lewitt and A. P. Eldred (equal). The Mayor having addressed the students, encouraging them to fresh exertions, Mr. Richardson presented the ex-secretary (Mr. J. J. Edwards) with an illuminated address and a handsome crucifix in recognition of the services rendered by him to the association. Mr. Edwards returned thanks, and briefly addressed the students. Afterwards the company, numbering about 180, adjourned to the large hall, where dancing was commenced, and continued up till an early hour, the music being provided by Messrs. J. Richardson & Co.'s reed band, under the direction of Mr. H. N. B. Richardson, B.A. Messrs. G. Woolley and W. Rowe acted as M.C.'s.

LIVERPOOL.

CHEMISTS' ASSOCIATION.—Mr. Conroy, vice-president, has promised a paper for the November meeting. His communications are always of a practical and interesting character and attract a good attendance. The title has not yet been announced.

PRELIMINARY EXAMINATION.—This was held at the Institute, Mount Street, on October 10, for the first time, by the new superintendent, eight candidates being present. This was a smaller number than usual at the Liverpool centre. Possibly young men are becoming alive to the fact that the business of chemist and druggist is getting overcrowded.

ENAMELLED COOKING VESSELS.—The paper contributed by Mr. Davies at the last meeting of the Chemists' Association was of considerable interest. The author pointed out that for cooking purposes no metal was so suitable, in all its characters, as silver, but as this was expensive, copper, brass, and iron were more generally used, the latter being the cheaper, and its value being enhanced by a coat of enamel to protect its surface, and to enable it to be more thoroughly cleansed. He then described the thicker cast-iron vessels of English manufacture and the more recent thin wrought-iron vessels of German make. Looking up the various formulæ for enamels which had been published, he found the first which was the subject of a patent contained lead, and this he must at once condemn. All the others were free from this metal, and contained tin, borax, &c., and in none of the formulæ was arsenic mentioned. It may be—and, in fact, was—present in minute quantity as an impurity in the other substances, but was in no way prejudicial to the use of such vessels for the purposes indicated. He had tried the effect of dilute acetic, lactic, and hydrochloric acids on a number of enamelled vessels exhibited, amongst them the particular one referred to in a recent trial, and from none of them had arsenic been dissolved out. Using 10 per cent. hydrochloric acid he did get a trace of arsenic, but in such minute quantity that it could not be extricated. The chief source of danger, if any existed, in the use of these arose from the fact that lactic acid dissolved out tin, and if tin in small quantity was prejudicial to health, then placing sour milk in such vessels should be avoided; but as far as arsenic was concerned (which was the object of his inquiry), there was no danger. A cast-iron stew-pan of English manufacture was lined with the best enamel (Kenrick's) of any he had

examined; a thick iron pie-dish, also of English manufacture (maker's name unknown), was the worst. The German wrought-iron pans came intermediately between these two. During the discussion that followed, and in which Messrs. Conroy, A. Abraham, Hockin, Ward, and Barrett joined, it was suggested that Mr. Davies should continue his experiments with enamelled evaporating basins, as these were of still greater importance to chemists. This he promised to do.

MANCHESTER.

MR. IVAN LEVINSTEIN, president of the Manchester branch of the Society of Chemical Industry, is on the Continent on business, and the first meeting of the branch, which in ordinary circumstances would have been held on the first Tuesday in November, has in consequence of his absence been postponed till the first Tuesday in December.

MR. BENJAMIN ROBINSON, manufacturing chemist, Salford, was on Wednesday afternoon presented with a petition, signed by every one of his fellow-councillors except one, cordially inviting him to allow himself to be placed in nomination as Mayor and chief magistrate of the borough for the next year. Mr. Robinson has intimated his acceptance of the requisition.

PHARMACEUTICAL ASSOCIATION.—OPENING OF THE SESSION.—The members of this association held their opening meeting for session 1889-90 on October 9 at the rooms of the Chemical Club, Victoria Hotel. There was a large attendance. Mr. W. Wilkinson, vice-president, was in the chair. The report of the council, read by Mr. H. Wilson, the secretary, stated that the council regretted that so little interest was taken in the affairs of the association and its now excellent library, which had been considerably augmented by the aid of the balance left over from the British Pharmaceutical Conference guarantee fund. Six meetings had been held during the past session "with average attendances." The treasurer's report, which was also submitted, showed that financially the society is in a satisfactory condition. Both reports were adopted. On the motion of Mr. Harold Woolley, seconded by Mr. W. Lane, the president (Mr. W. S. Brown) and the other officers were re-elected. Some conversation followed with regard to the desirability of holding a social meeting some time during the session, and in the end a committee, consisting of Mr. Harry Kemp, Mr. W. Lane, Mr. Bowden, Mr. Smith, of Pendleton, Mr. Harold Woolley, and Mr. H. Wilson, was appointed to consider what form the social meeting should take and report to the next meeting, to be held at the same place on the second Wednesday in November. At the close of the meeting several papers were promised, and the chairman and others expressed a hope that the session would be a very successful one. "To which hope," adds our correspondent, "I say, Amen. It is quite time that some attempt was made to infuse life into the dry bones. Last session, notwithstanding the alliterative and euphemistic 'average attendances' spoken of in the council's report, the attendance was, as a rule, poor in the extreme. One gentleman, indeed, prepared a paper, and it has not been read to this day because there was no quorum at the meeting at which it was to be submitted. This, it will be agreed, is not a state of matters creditable to the pharmacists of the Manchester district."

SHEFFIELD.

THE UNQUALIFIED SELLER.—Mr. E. Radley Learoyd, ex-President of the Sheffield Chemists' Association, writes to the *Sheffield Telegraph* in reference to the inquest on Edith Platts, of Riddings, who died from taking Battle's vermin-killer, as reported elsewhere. Mr. Learoyd seems to agree with us that the best interests of chemists generally will be best secured by a strict adherence to the Act as applied to poisons. This, he says in his letter, "is the second case lately of a similar character, the sale in both instances being by a junior, and, of course, unqualified person. I believe it is an open secret, which before long will be made public, that the Act of Parliament regulating the sale of poisons distinctly states that these articles (including strychnine and its preparations) shall be sold only by registered persons, and not by any unregistered person, except those who are registered under the Medical and Veterinary Acts, &c. And I

would respectfully suggest to those interested that it is time to set their houses in order if the Act of Parliament is not to remain a dead letter in this respect, and this I think will hardly be, in the face of these repeated cases of poisoning. Attention to detail by the qualified, and, therefore, more or less experienced chemist, in the sale of poisons would, I am firmly convinced, often prevent these unfortunates proceeding in their rash act. Such has been my own experience."

IRELAND.

PHARMACEUTICAL SOCIETY OF IRELAND—OCTOBER PRELIMINARY EXAMINATION.—Passed candidates:—Messrs. Henry McNeil Gordon, Thomas Frederick Bell, William Redpath, and James Fitzgerald. Four were rejected.

A NEW dispensary is about to be built at Dunmurray, Co. Antrim.

A MOVEMENT is on foot among apothecaries' assistants to obtain a half-holiday every Monday.

ONE of the patients sent recently to Mr. Govern, the Cavan Pasteur, has just died.

MR. J. D. ANDERSON, druggist and general merchant, Cookstown, has been nominated for Town Commissioner.

THE Bushmills Dispensary Committee notify that on Thursday, October 31, they will elect a duly-qualified officer at a yearly salary of 90*l.* and fees.

DR. SHOULDHAM H. DUNLOP has been appointed dispensary officer for the Mountpottinger district, formerly held for thirty-two years by his father.

THE founder of the Irish Liberal Pharmaceutical Association states that the organisation will for the present remain inactive, pending a resumption of hostilities by a section of the Council.

THE Belfast artisans have subscribed for and presented to the public library a magnificent portrait in oils of Lady Haslett, wife of Sir James H. Haslett, chemist and druggist.

TENDERS for a year's supply of drugs and medicines are invited by the governors of the Kilkenny Infirmary, and also by the guardians of the Belmullet Union, the latter including three adjacent dispensaries.

AT the Limerick Petty Sessions, held last Saturday, Robert Gubbins, an assistant employed by Messrs. Evans & Co., druggists, George Street, was returned for trial for embezzling 150*l.*, the property of his employers.

MR. WILLIAM CROFTS, L.A.H., Dublin, whose death at Cork is notified, has bequeathed legacies to a number of hospitals and local charities, which, however, are not to be paid until after the decease of his widow.

PHARMACEUTICAL CHANGES.—Mr. W. Michie, L.P.S.I., Baggot Street, to be manager of Gordon's Medical Hall, Ranelagh, and Mr. H. McBride, L.P.S.I., Newry, to be manager of the City Medical Hall, Armagh.

IRISH PHARMACEUTICAL CHEMISTS' ASSOCIATION.—The monthly meeting of this body, arranged to be held on Wednesday last, was postponed for a few days, in consequence of a quorum of members not being present.

AT the Irish Court of Bankruptcy a few days ago an insolvent druggist admitted that he was in the habit of selling under cost price "to encourage general purchasers." Cutters ought to take warning by the result, which is stated to be 2*s.* in the pound.

THE board of guardians of the North Dublin Union condemn the excessive expenditure for drugs and medicines, and propose to appoint a pharmaceutical chemist to check future requisitions and supplies, such having formerly been the practice.

ENTERPRISING chemist, persuasively: "Our special blood-mixture can be safely recommended to ensure purity and tone."—Aristocratic dame, with asperity: "Perhaps you are unaware that my family is one of the old Norman line? Blood-mixture, indeed!" Sniffs disdainfully and walks out.

APROPOS of the recent outcry in Dublin over the alleged neglect of the authorities of the Whitworth Hospital, Mr.

T. E. White, L.A.H., Dublin, has been severely handled by a local evening newspaper, which, despite the doctor's lucid explanations, continues the attack with unabated vigour, apparently on the principle that the opportunity of "taking down" the faculty is too good to be lost.

ON Monday last, at the Recorder's Court, Dublin, Mr. James Shanks, manufacturing chemist, Townsend Street, was sued by James Halpin, Ennis, an arranging trader, to recover 10*l.* 14*s.* 5*d.* for goods. The plaintiff, who recently paid 5*s.* in the pound, in returning to the defendant some articles previously purchased, claimed their full value of 20*s.* in the pound. The defendant disputed the demand, and after a lengthy hearing a decree of 5*l.* 5*s.* and 2*l.* expenses was given to the plaintiff.

SCOTLAND.

DUNDEE.

UNIVERSITY COLLEGE.—At a meeting of the Council, held last week, it was intimated that Mr. F. T. Hamblly, junior demonstrator at the chemical laboratory, South Kensington, had been appointed assistant lecturer and senior demonstrator, in succession to Dr. Andrew Thomson. Owing to the increase of work in connection with the College and Technical Institute classes, it has been found that a second demonstrator will be required, and the Council, along with the Technical Institute committee, are on the lookout for a suitable person to fill the position.

CHEMISTS' ASSISTANTS' AND APPRENTICES' ASSOCIATION.—The second meeting was held on Thursday, October 10. Mr. John Forsyth, the president, was in the chair, and delivered an address, in the course of which he expressed the hope that the splendid start which the association had made would be the means of encouraging the members during the whole session. He trusted all would derive some advantage from the association, and that everyone would aim at helping his neighbour as far as possible. Referring to the musical evenings, he said he was sure they would prove a success. They all felt in want of a little relaxation from the ordinary routine of work, and these evenings would be pleasant and harmless, and would help to foster a more friendly spirit amongst the young men of the trade. Finally, he urged the members to use all their endeavours to keep up a good attendance. After some remarks from Mr. T. C. Henderson, Mr. Wm. Mair, and others, the secretary gave full particulars regarding the prize competition, and intimated that the papers for the apprentices' competition must be in his hands by November 28, while the "Progress of Pharmacy" essays for prizes, offered by Messrs. Burroughs, Wellcome & Co., should be handed in by January 16, 1890. Mr. Wm. G. Lamont offered, in a letter, to take up Preliminary classes, provided a fair number of students were enrolled. It was agreed to give Mr. Lamont the use of the room, and a guinea from the prize fund, to be awarded to the most successful students. The next meeting of the association will be held on Thursday evening, October 24, when a paper on "A Few Medicinal Syrups" will be read by Mr. J. C. Henderson. In connection with the Preliminary classes, Mr. Lamont met those desirous of joining on Tuesday evening, when about a dozen gave in their names. The class is to be started at once, and will prove a great boon to many of the apprentices.

GLASGOW.

GLASGOW CHEMISTS' AND DRUGGISTS' ASSISTANTS' ASSOCIATION.—The opening meeting of the session was held on October 9, Mr. James Robb, president, in the chair. There was a large attendance. The event of the evening was the delivery of an inaugural address by Mr. Alexander Kinninmont, honorary vice-president. Mr. Kinninmont, in opening his remarks, mentioned that he had just lost an assistant who, after fifteen years of faithful service, had been suddenly cut off after an illness of two hours. This had given a shade of gloom to his thoughts, from which he felt it impossible to tear himself away. While personally he would have liked to see a younger man in the place he had been called to fill, he had great pleasure in undertaking the duty they had laid upon him; and, of course, there were many things that an old man could say with advantage. Old men had got clear of the natural impatience of youth. They had a

broader view of life, and could see the effect of things more fully; and while they felt that for themselves the future had not much to disclose, they could hold out a picture of hopefulness and encouragement to younger men. It was forty-four years since he entered the drug trade, and, looking back, he could testify that the condition of things then was a great deal worse than at the present day, and any improvement that had taken place had been largely due to the work of such associations as the one they were seeking to establish now. Mr. Umney, at the recent Conference at Newcastle, had attributed the advances made by pharmacy in recent years to the work and influence of the Conference. While not wishing to deny due honour to the Conference, he felt that the work of local associations had also had a most important share in helping forward the good work. He would strongly advise them to aim at supplying all the material for their meetings themselves. It was all very well to get lectures by specialists from outside, but it was rather an awkward thing to bring a public lecturer to address an audience of perhaps ten or fifteen people. One great object of their association was to get their talents for observation developed. He would also advise them to take an interest in and support what he would call the politics of the trade. At present they were suffering from what he could not but regard as a complete misinterpretation of the Pharmacy Act of 1868. The principle of that Act was to regard the master as alone responsible; but in recent decisions that principle had been ignored, and it was asserted that any man could carry on a drug business if only he were a member of a limited company. With all deference to the House of Lords, he submitted that their judgment was wrong and utterly beyond the intentions of the Act. It was now said that all assistants must be qualified. The application of such an interpretation would involve a great deal of difficulty. Had such an interpretation been put upon the Pharmacy Bill when it was in Parliament it would have been scouted out of existence. He did not believe such a principle could be carried out in practice. It would give rise to an agitation that would probably lead to a repeal of the Pharmacy Act altogether. Mr. Rutherford Hill, Edinburgh, having been called upon, added some congratulatory remarks, and said, should they feel disposed to act upon the suggestion to devote attention to pharmaceutical politics, he would like to point out the necessity for making sure that they knew and accurately understood the existing conditions. He had been greatly surprised to find that many chemists had never even seen the Pharmacy Act of 1868, and very few indeed were intimately acquainted with its actual provisions. They must have noticed that many who discussed these subjects very freely, and even writers in the trade journals, laboured under the fatal disadvantage of not knowing or misunderstanding what they were talking about, and that was a great pity. Mr. John Macmillan and Mr. Archibald Paterson added interesting speeches, and on the motion of the chairman a cordial vote of thanks was passed to Mr. Kinnimont.

General and Provincial News.

THE RISKS OF PRACTICAL PREACHING.—The Rev. Mr. Smith, a baptist minister of Clayton, Indiana, having criticised the druggists of the town in a sermon he preached one Sunday in September, met Mr. Millard Jones, one of the local pharmaceutical body, in the post-office the next day, and the two came to high words. Smith struck Jones with a large cane, whereupon Jones used his pocket-knife upon Smith, making several cuts in the abdomen. Smith was not expected to live. Jones was arrested, but the magistrate dismissed him upon the ground that his acts were justifiable.

A GRATEFUL PRESIDENT.—President Reitz, on the occasion of a visit to Jagersfontein, Orange Free State, remarked in a speech as to his loss of voice. Mr. Coaker, chemist, of that town, hearing this, at once sent him a bottle of voice "tablets," prepared by Messrs. Burroughs, Wellcome & Co., with the result that at the public banquet given in his honour the same evening, the President publicly thanked Mr. Coaker, and said it was owing to the medicine so kindly sent him that he was able to speak in response to the toast of his health. The following morning on leaving the town the

President, with his guard of honour, and escorted by the leading officials, clergy, and merchants, and mounted artillery, in gala costume, made a long *détour* through the principal streets to call upon Mr. Coaker, and again thanked him for his kindness. The President alighted from his carriage at Mr. Coaker's shop, and when he left took with him two bottles of the ordinary tabloids of compressed chlorate of potash.

A DISPUTED AGREEMENT.—At the Welshpool County Court on Tuesday, Alfred Holwell, chemist, sued T. R. Moses, chemist, Shrewsbury, for 18*l.* 1*s.* 1*d.*, for balance of thirty-seven weeks' wages. Mr. E. M. Jones appeared for the plaintiff, and Mr. Dovaston, of Shrewsbury, for the defendant. Mr. E. M. Jones stated that plaintiff was a chemist, who had been up to September 14 managing the shop of Mr. Moses, at Welshpool. The only question his Honour would have to decide would be what was the agreement between the plaintiff and the defendant as to the sum per week. Plaintiff was called, and stated that he, about December 21, was in communication with defendant with regard to coming to Welshpool. Defendant offered him 25*s.* a week, but he wrote declining this, and said he would come for 30*s.* A day or two after he received a telegram saying, "Come at once." He went on December 27, 1888, and remained till September 14, 1889. The contention for the defence was that defendant had agreed to accept 25*s.* a week. Defendant said he did not remember sending plaintiff a telegram at all. He had offered plaintiff 25*s.* a week, and he came. The case was adjourned for the production of the telegram.

HOW HE SOLD HIS SHARES.—The *National Druggist* is one of the many pharmaceutical papers published in the United States. This one has its offices in St. Louis. It is understood that the Richardsons, wholesale druggists of that city, own a controlling interest in the paper. A Mr. Otto F. Oberbeck had been its general manager and the president of the stock company which owned it; but the Richardson firm had discharged Mr. Oberbeck. This gentleman, who claimed to have built up the paper, and thought he had been unfairly treated, called on Mr. Clifford Richardson, with whom were Mr. James Richardson and a Mr. Moffit, and thus narrates what happened:—"When I reached the office I attempted to reason with 'Cliff' Richardson. 'Jim' was in the room, too. I asked him what my stock would be worth to him. 'Nothing.' 'Would he buy the stock?' 'No.' Finally, nerved by desperation and a sense of my wrongs, I spread the stock out over the table, gave my watch into Moffit's hand, levelled my revolver at 'Cliff's' head, and gave him just sixty seconds to make up his mind whether to buy my stock or grace a funeral. He told 'Jim' Richardson to sign a cheque for \$500. I endorsed the certificate of stock and passed it over, got my cheque, and left."

A POISON-BOTTLE DEAL.—William Child, 25, described as a merchant, of 120 Hyde Park Road, Leeds, was charged at the South Shields Police Court on October 10 with having by a certain false pretence obtained from Dr. J. F. Armstrong the sum of 5*l.* 10*s.*, with intent to cheat and defraud him of the same. The prosecutor stated that on May 20 last the accused called upon him at his surgery in reference to a patent dispensing-bottle. He had previously got a card and seen the bottle advertised in the *Medical Gazette*. The accused produced a card similar to the one which witness had received, and stated that he was the patentee of the bottle. He said that he had supplied many doctors in the neighbourhood with his patent bottle, and particularly mentioned Dr. Morgan, of Sunderland, who, he alleged, was delighted with the patent. Witness eventually gave the accused an order. The latter said he could supply the order much cheaper if it was prepaid, and, in consequence, witness gave him a cheque for 5*l.* 10*s.* He had since ascertained that the accused cashed the cheque the same afternoon. He had made inquiries of Dr. Morgan, and found that the accused's statements were untrue. Inspector Patterson said that when he apprehended the prisoner on a warrant, he said he had been seeing a solicitor, and meant to refund the money. He also said he was the patentee of a dispensing-bottle, which was made at the Ashley Bottle works, Castleford. Witness went to these works, and found that Child was not known there. Afterwards the accused was again charged, and he replied, "That's all right." Remanded on bail.

CAUTION TO OPIUM-EATERS.—An inquest was held at Bourne on Monday respecting the death of a woman named Catherine Gilhert, aged 74, who lived at Dyke. Her husband said, in his evidence, they had been married forty-five years, and deceased enjoyed general good health until August. She died on Thursday, but some few days prior to then had greatly recovered from her illness. For some forty-five years she had been a confirmed opium-eater. He did not know of that until some considerable time after marriage. Their doctor was acquainted with the fact, and his orders were that she was not to have any. On Tuesday deceased begged of witness to procure her some of the "old stuff." He got $\frac{3}{4}$ oz. from a druggist at Bourne, and when he got home she again begged for it. He held the box to her, and she took a piece in her fingers. He said to her, "I am sure you have got too much," and deceased replied, "If you think so I will take a bit off," which she did, rolling the other portion up in some flour and eating it. Shortly afterwards she died. He had refused to let her have any for three weeks, but was eventually persuaded by her saying that she should be better if she could get some. He had laudanum in the house under his care. About a fortnight ago, thinking it was less harmless than the opium, he persuaded her to take some of that liquid, which was administered in teaspoonfuls at a time. Dr. Robert Brown, B.M., of Bourne, said he knew deceased was a confirmed opium-eater. She ate some 50 grs. a day. *When he told last witness that he was not to give her any he did not suppose for a moment that he would comply with his orders.* Such a confirmed opium-eater as deceased could not have existed without it. It would be absolutely necessary for her to keep eating it, as it was the chief stay of her life. If, as was stated by the husband, she was kept three weeks without it, and then given it, the drug would go very bad with her. His opinion was that her death on the Thursday afternoon was caused by an overdose of opium acting upon her feeble condition—the result of her recent illness. The jury concurred in the medical opinion, and held that no blame was attached to the husband in administering the drugs, but expressed their appreciation of his kindness to deceased in her illness. [We have two reports of this case before us, and in both it appears that the doctor made the statement which we have italicised. If he did, we cannot understand why some reference should not have been made to it in the verdict. According to his own evidence, he gave advice which he knew, if followed, would kill the poor old lady, but "did not suppose for a moment" that his orders would be complied with!]

THE UNQUALIFIED SELLER.—A woman name Edith Platts, 37, residing at Riddings, took Battle's vermin-killer, and died last week. At the inquest, which was held on Friday last, her father said he had a suspicion she was pregnant, and this was confirmed by Dr. Waters. Ernest Walter Greaves, 17, son of Samuel Greaves, chemist, Ironville, deposed that the deceased on Saturday night purchased at the shop a packet of Battle's vermin-killer, for killing mice. She gave the name of Elizabeth Salt. The Coroner: Did she bring anybody to vouch for her? No. Did you know her previously? No. Don't you see in the poison-book a space left for the signature of the witness? Yes. He added that Mr. Smith, the assistant, was with him in the shop. The Coroner (to Smith): Why didn't you insist on having a witness? Smith: As it was a local case, I did not think it was necessary. The Coroner: But you did not know this woman, and the law says you should see that she is vouched for. There is no precaution if you do not fulfil the terms of the Act. Smith: We are very particular in regard to persons from outlying districts. The Coroner: But you are not particular. You did not comply with the Act in this case. If proper inquiries had been made this poison would not have been supplied, and this poor woman might have been alive now. The witness (Ernest Walter Greaves) then stated that after the deceased had signed the name "Elizabeth Salt" he supplied her with the packet of vermin-killer, which contained about three-quarters of a grain of strychnine. He had seen the body of the deceased, and he was sure it was the person who purchased the vermin-killer. William Joseph Smith said he lived at Ironville, and was general assistant to Messrs. A. Greaves & Son, chemists. He corroborated the evidence of the last witness as to the sale

of the poison to the deceased. Before she signed the poison book the deceased seemed a little depressed. The Coroner: You noticed that? Why didn't you take it on yourself to ask her to bring somebody to vouch for her? Witness: I didn't care to do it. The Coroner: Why not? Witness: My suspicions might have been wrong. The Coroner: But you would have been perfectly justified in asking for it—in fact, the law requires you to do so. With the Swanwick case in front of you, and especially as she looked so distressed, I should have thought you would have done this. You would not have done much harm, and you might have done a great deal of good. Dr. Wm. A. Waters, of Greenhill Lane, gave the opinion that death was due to strychnine poisoning. Deceased was five or six months advanced in pregnancy, and he suspected she had taken poison. The Coroner strongly commented on the large number of similar cases. In this instance the poison was sold to a stranger without a witness being required, and thus there had been here a deliberate breach of the law. He added if any other person than the one purchasing the poison had suffered, it would have been a very serious matter for the chemist. A verdict was returned of "Suicide while in a state of temporary insanity."

Legal Report.

COMMERCIAL TRAVELLERS.

At the Birmingham County Court on Friday, before his Honour Judge Chalmers, an action was brought by Aaron Scott, commercial traveller, of Frederick Street, against Crooke & Abrahams, of New Meeting Street, both in that city, to recover 29*l.* 1*s.* 4*d.*, in respect of damages for breach of contract and expenses incurred whilst in the defendants' employment. Mr. Tyler appeared for the plaintiff, and Mr. Lane for the defendants. Mr. Tyler said that the defendants engaged the plaintiff as traveller on March 25 last. By an agreement entered into between them he was to travel in the West of England and South Wales, and he was to have a salary of 1*l.* per week and 8*s.* per day expenses, together with railway, &c., fares, and a commission of 2½ per cent. on cash received over 1,000*l.* per annum, the engagement to be terminable by three months' notice. Shortly after the plaintiff entered upon his duties the defendants began to grumble at the small amount of business he was doing, and the large amount of his expenses. This they continued to do until April 16, when the plaintiff gave notice to terminate the engagement, and the notice was accepted. After that period the relations between the parties grew more strained, and the defendants sometimes wrote to the plaintiff in a facetious style of grumbling. On May 8 they wrote sending him a cheque for 5*l.* 17*s.* 2*d.* for the week, and pointing out that from March 26 to April 16 his expenses were about one-fourth of the sales, and since giving them notice his expenses had exceeded his orders, giving them the idea that he was having a very easy time of it at their expense. The letter proceeded:—"Do you think it honourable to allow your expenses to exceed your return? We should feel ashamed to send to any firm so few orders for so large an expenditure each week. We note by your expense list 1*s.* stamps. Out of that there are about three letters for us, and we presume the remainder to be about eighteen advices only; yet you managed to call at sixteen towns, and enjoy a goodish few 'bus rides. We trust your health remains good, that you can manage with so little walking exercise." (Laughter.) To that letter the plaintiff replied that the defendants appeared to have overlooked the fact that their name had never been heard of before in the district. They had not so much as advertised their name in a trade journal, and yet they expected a good result. He did not pay the 'bus fares to save his legs, but to carry his luggage, and he was hurrying over the district so as to cover it the first time with as little expense as possible. Plaintiff finished his journey on May 15, and came to Birmingham to see the defendants. He suggested that he should go northwards, but they refused to allow him, and suggested that he should go over his own ground a second time. He replied that the accounts he had opened were quarterly ones, and

not then ready for collection. Ultimately it was arranged that he should go to the Southern and Eastern counties in order to fill up his time before starting on his second journey in the West of England. He sent them some orders from the South of England, but was unsuccessful in the East. At Colchester he received a letter from the defendants, dated May 27, thanking him for a good order he had sent, and hoping he would continue to send like orders. He proceeded to Yarmouth and Lincoln, and was surprised to receive a letter, dated June 3, from defendants, dismissing him from their service for having broken his contract. He came to Birmingham to see the defendants, but they would have nothing to say to him. Plaintiff was called, and gave evidence in accordance with Mr. Tyler's statement. In cross-examination, he denied that he told the defendants that he could do a good business for them at once. He led them to understand that a good business would result in time. The 1,000*l.* a year mentioned in the agreement was not his proposal. He was quite clear that the defendants gave him leave to go to the Southern and the Eastern counties. Mr. Lane, for the defence, said that the plaintiff was to give the whole of his time and attention to South Wales and the West of England. The Judge: That condition may be waived, and your clients' letter to him at Colchester approved of what he was doing. Mr. Lane said that the explanation of that was this, that at the interview in Birmingham the defendants gave the plaintiff permission to go to the Isle of Wight and that neighbourhood, which could be easily covered from Bristol, the plaintiff's headquarters. But they had no intention of letting him go to the Eastern counties, and no mention was made of his going there. The letter to Colchester referred to an order sent from Ventnor, and the defendants had no idea at the time they sent that letter that the plaintiff was going to the Eastern counties on their behalf. Colchester was the "return address" he gave them. The fact was that the plaintiff wanted to go to the Eastern counties by hook or by crook, and at the expense of Abrahams & Croke. (Laughter.) The defendants were called, and gave evidence in support of Mr. Lane's statement, but his Honour told Mr. Tyler he need not cross-examine them. In giving his decision, the Judge said there had no doubt been some misapprehension between the parties, but there was no such misconduct on the part of the traveller as justified the defendants in summarily dismissing him. If he went wrong in going to the Eastern counties, the defendants could have recalled him, and might possibly have been entitled to refuse to pay him for that journey, but there was no ground for his dismissal. On the question of damages, he should allow the 1*l.* a week salary, but only half the 8*s.* per day expenses. This reduced the amount to 21*l.* 1*s.* 4*d.*, and for that he gave a verdict against the defendants.

Gazette.

PARTNERSHIPS DISSOLVED.

Northcott & Sons, Rood Lane, City, chemical and drysaltary brokers.

Penhall & Batterham, St. Leonards-on-Sea, physicians, surgeons, apothecaries, and accoucheurs.

Roden, S. S., and Stevens, W. H. A., Droitwich, physicians and surgeons.

THE BANKRUPTCY ACT, 1883.

RECEIVING ORDERS.

Brown, John, Rochdale, mineral-water manufacturer.

Smith, Nathan, Amersham, chemist and dentist.

FIRST MEETINGS AND PUBLIC EXAMINATIONS.

Brown, John, Rochdale, mineral-water manufacturer—Oct. 23, Town Hall, Rochdale; Nov. 3, Town Hall, Oldham.

Hillier, H. J. (trading as the Oil of Sahara Company, and as J. Belleine & Co.), Praed Street and Edgware Road, W., manufacturer of the Oil of Sahara—Oct. 25, 33 Carey Street, Lincoln's Inn Fields; Nov. 14, 34 Lincoln's Inn Fields.

NOTICE OF DIVIDEND.

Harman, Francis Bennett, Farmer's Road, Kennington Park, and Crouch Hill, mineral-water manufacturer—first and final div. of 2*s.* 8*½d.*, any day, Chief Official Receiver's offices, 33 Carey Street, Lincoln's Inn.

EXTRACT FROM THE REGISTER OF DEEDS OF ARRANGEMENT.

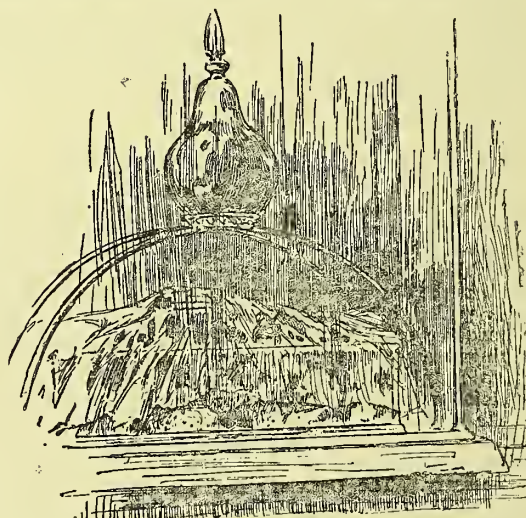
The following deeds of arrangement with creditors have been filed at the Bills of Sale Office, under the provisions of the Deeds of Arrangement Act, 1887. Some of these deeds are for the purpose of carrying out compositions with creditors (and such are specified below), but the great majority of them are "assignments" in the ordinary form, to a trustee or trustees, for the benefit of creditors. The Act referred to expressly provides that registration shall not give validity to any deed which is an act of bankruptcy, and there is no provision, in the Act, making any of these arrangements binding upon dissenting creditors.

Phethean, James, 88 Deansgate, Bolton, chemist and druggist. Trustee: Harold Mather, 4 Fold Street, Bolton, chartered accountant. Date, Oct. 4; filed, Oct. 10; unsecured liabilities, 977*l.* 4*s.* 9*½d.*; estimated net assets, 150*l.*

	£	s.	d.
Charnock, Mrs. James, Bolton	50	0	0
Colthurst, Armenia, Moses Gate	15	0	0
Guy, John, Everton, Liverpool	344	0	0
Morris, John, Bromley Cross	230	0	0
Phethean, Joseph, Bolton	12	13	2
" " Haugh	50	0	0
" " M. C., Bolton	50	0	0
" " Wm., Moses Gate	25	0	0
Priestley, W. & Co., Bolton	11	12	2
Raines & Co., York	10	19	8

WINDOW DISPLAY.

THE *American Druggist*, in the course of a series of articles on drug-shop architecture, calls attention to an example of pleasing window-decoration, produced by a skilful arrangement of stock. A large, squat, colour jar is supported in the middle of each window by solid brass rods, one starting from each of the four corners. In one window is seen a tasteful grouping of brushes. In another, sponges fill a case,



upon the top of which stand large bottles of lavender water, which, with their clear emerald-green bodies and white kid tops, look like a company of soldiers mounting guard over a heap of delicate, painted, satin perfume sachets. A feature of the interior is the presence of three tall white jars, with rich-coloured coats-of-arms on them and gold tops, on a slab at the foot of a long mirror.

INFANT MANAGEMENT.—A country paper, praising the virtue of a new make of infants' feeding-bottle, winds up by saying, "when a baby is done drinking it must be unscrewed and laid in a cool place under a tap. If the baby does not thrive on fresh milk it should be boiled."

Pharmaceutical Society of Ireland.

THE annual meeting of the members of the Pharmaceutical Society of Ireland was held on October 7. There were 18 members present. The chair was taken by the President, Mr. Charles Evans.

ELECTION OF MEMBERS OF THE COUNCIL.

The ballot for the election of members of the Council resulted as follows:—Dr. Tichborne, 60 votes; Mr. Charles Evans, 59; Mr. Grindley, 58; Mr. Doran, 55; Mr. Andrew McNaught, 53; Mr. Johnston Montgomery, 53; and Mr. William Hayes, 34.

Mr. McNaught and Mr. Montgomery take the places of Messrs. Payne and Evans.

THE PRESIDENT'S RETROSPECT.

THE PRESIDENT made a few observations on the condition of the Society, and mentioned the difficulties of the year, especially in connection with the failure to arrive at a unanimous conclusion respecting the Bill which was to be laid before Parliament. They must all regret the withdrawal of so many members from the Society, for, no matter how they had differed from those gentlemen, they worked zealously for what they considered to be the good of the Society. As to the examinations, the results had been very similar to those of the previous year. At the Preliminary there were 56 candidates, being one less than in the preceding year; and of these 34 were successful. For the licence there were 38 candidates, being a decrease of 4 from the previous year; and 21 of these passed. But latterly the Society had been accepting the Preliminary examinations of several other licensing bodies; and therefore the number of candidates appearing at the Preliminary examination in no way represents the number that may come in for the licence later on. The Law Committee had not been idle. It was the wish of everybody connected with the Society to put a stop to illegal compounding, and the Council are determined to do so. The members now number 123, as against 81 at the last annual meeting.

THE SOCIETY'S FINANCES.

MR. HODGSON (treasurer) said he never had to report so small a balance in hand as on the present occasion. In the year twenty-two gentlemen paid the licence fee, which produced an income of 115*l.* 10*s.* In 1888 the number who paid the licence fee was twenty-eight, producing an income of 147*l.* This year forty-six Preliminary examination fees produced 96*l.* 12*s.*, as against fifty-three last year, producing 111*l.* 16*s.* The entire income derived from fees, including 9*l.* 9*s.* paid for three licentiate apothecaries registered as pharmaceutical chemists, was 229*l.* 19*s.* this year, whereas in 1888 fees to the amount of 273*l.* 10*s.* 6*d.* were paid. In the subscribers, however, they had a substantial increase. Last year sixty subscribers produced 63*l.*; this year they had ninety, producing 94*l.* 10*s.* Adding 7*l.* 9*s.* dividends received, 4*l.* 8*s.* from the sale of calendars, and 123*l.* 10*s.* 11*d.* the balance with which they commenced the year, the total income for the year amounted to 463*l.* 3*s.* 7*d.* The expenditure was as follows: Payment of fees to examiners, 87*l.*; returned fee, 5*l.* 5*s.*; salary to Mr. Ferrall, 52*l.*; for reporting meetings, 14*l.* 14*s.*; two payments of 20*l.* each for the *Pharmaceutical Journal*; rent, 50*l.* Messrs. Casey & Clay's bill for the Ballybay prosecutions amounted to 60*l.* 4*s.* 5*d.* The travelling expenses of the President, Mr. Allen, and the Registrar, and other expenses, made a total of 65*l.* 10*s.* 8*d.* for those prosecutions. Then, Messrs. Clay & Close's bill of costs in connection with the promotion of the Parliamentary Bill—a separate item—came to 73*l.* 10*s.* Adding 13*l.* 13*s.* for travelling expenses and sundry small expenses, the total of law costs in connection with the Parliamentary Bill came to 88*l.* 12*s.* 4*d.* An item of 4*l.* 5*s.* for printing that must come into the cost of that bill, but which appears in a different part of the account, raises the amount to 92*l.* 17*s.* There is an item of 13*l.* 18*s.* 4*d.* paid for printing and stationery to Messrs. Gunn & Cameron. The Registrar's account for sundries (including postage), amounts to 25*l.* 4*s.* Fire insurance, chemicals from Apothecaries' Hall for the examiners, bottles, and specimens, &c., raise the account for "sundries" to 35*l.* 9*s.* 9*d.* The final result is a

balance of 10*l.* 0*s.* 2*d.* to come into next year's account. The Society has in stock 248*l.* 3*s.* 1*d.*, and, adding the balance of 10*l.* 0*s.* 2*d.*, there was to credit on October 1 258*l.* 3*s.* 3*d.*

After remarking on the expense of prosecuting infringements of the Act, Mr. Hodgson said the Society is at the present moment out of debt, but it has very little to work on, and it would be a very unfortunate thing if you should have to sell out any stock for the purpose of meeting current expenses. "I have often said," he continued, "that your residence here should be only temporary, and that it should be your ambition to increase your funds in order to be able to get premises of your own. But if you indulge in law it will necessitate the selling out of stock, and remove to a distant period the chance of your getting out of these premises."

Professor TICHBORNE moved that the treasurer's account be accepted and adopted. He perfectly appreciated Mr. Hodgson's anxiety, but he took a more hopeful view of the prospects of the Society than Mr. Hodgson did. The fact that they had nearly doubled the number of their members—the increase being from 63 to 123—was most encouraging. It, of course, meant that the Society and its Council had the confidence of the licentiates. And this great increase in the number of members had only taken place within the last two or three months; so that the financial statement for the past twelve months, although perfectly correct, did not exactly represent the financial condition of the Society. Again, there had been an extraordinary expenditure during the last year. A tremendous sum had been spent in law expenses connected with the unfortunate Bill. The Ballybay outlay he did not call unfortunate, for reasons which he would give presently. He thought they might almost congratulate themselves on having a balance, however small; for his part he had not expected that there would be any balance at all, and he had feared that they would be obliged to sell out stock in order to wipe out these extraordinary expenses. They had not, however, had to do so. As to the Ballybay expenditure, the case was an exceptional one. It was undertaken to assert a perfectly legitimate function of the Society—namely, the putting an end to illegal compounding; and there was not the slightest doubt that if they had failed in it they might just put up their shutters at once, metaphorically speaking, for then any man who carried on illegal compounding would have been able to snap his fingers at them.

MR. WELLS begged to second the motion. The Ballybay case, if it had cost them all the money they had, would have been worth that to them. The point decided was of the greatest importance to the Society. When the Belfast prosecutions were undertaken, there would have been a lot of convictions had they had that ruling of the higher court. The Belfast magistrates held that, according to their Act, they should have had a register of chemists and druggists, and the prosecutions before them were thrown out on that point. The Ballybay magistrates took the same view. But when their decision was brought to the higher court the judges said that the law of the Ballybay magistrates was bad, and that the Society were not bound to have such a register, and that accordingly the magistrates should have convicted. If, therefore, the Society should undertake other prosecutions—and he hoped that they would have a good many more of them before the year was out—it would be done at much less expense. These magistrates in the country would not convict a man unless they could not help it. But now, after the ruling of the higher court, they would have to convict, whether they liked or not. As to their Parliamentary business, they got off very cheaply. It was money lost, no doubt, but he thought the majority of the gentlemen present would rejoice with him that the Bill was thrown out, and that the money was spent in getting it thrown out instead of passed.

The question was raised at the Council during the year whether they should not give up the *Pharmaceutical Journal*. He had been thinking a good deal over the matter, and he thought that if they were to give up the *Journal*, and spend the money thus saved in prosecutions, the members of the Society would be better satisfied than they were at present. He did not believe that they would lose one member by such a change.

The motion was then put, and carried unanimously.

After some discussion respecting the election of new

members votes of thanks were passed to the treasurer and president, and the proceedings terminated.

* * We printed and issued to all Irish subscribers, as a supplement to our last number, a full report of this meeting. We have a few extra copies of those supplements, and shall be glad to send one, so long as we have any, to any subscriber sufficiently interested in the proceedings to send a post-card asking for it.

THE FIRE AT MESSRS. BURROUGHS, WELLCOME & CO.'S FACTORY.

THE inquest held concerning the death of William Godfrey Jacobs, the fireman who lost his life at the fire which occurred at the factory of Messrs. Burroughs, Wellcome & Co., Wandsworth, on September 12, was resumed at the Town Hall, Wandsworth, on October 11, before Mr. A. Braxton Hicks, the Mid Surrey coroner, and concluded.

Mr. Sexton Simonds watched the case for the Fire Brigade; Captain Davis, late of the Margate Fire Brigade, attended to assist the coroner as assessor; Mr. Wallace, barrister, attended for the firm; and Inspector George Earwaker watched the case on behalf of the police.

The injured fireman, Charles William Ashby, was the first witness. He described what took place inside the building. He, with Pritchard, Jacobs, and Howard, had not been on the top floor more than four minutes when the smoke and heat became too great for them to continue their labours, and they made for the windows to endeavour to get some air. Prior to this they had heard no explosion, nor had they noticed any fumes other than the ordinary smell of wood burning. The smoke suddenly came towards them in a roll, and by the feel of it they could tell it was both fire and smoke. The fire seemed suddenly to rush upon them from the centre of the building, and they first of all sought to descend by the staircase; but the rush of smoke and flame rendered this impossible. Jacobs was with him all the time, and, seeing that he was very much exhausted by the smoke, the witness partly led and partly dragged him to the window for fresh air. In order to escape they first tried to force the window-bars out with their hands, and then with their feet, but they were too strong. He then broke the glass with his helmet and made another attempt to get the bars out, and, finally, somehow got outside and hung on to the sill, but did not know whether Jacobs assisted him.

By the Coroner: They had their axes with them, but did not use them, as they thought they were too small to be of any use. Jacobs got his out, but he did not know whether he used it. He could not say why Jacobs could not also have got out. The aperture was probably not large enough, or he was too far gone. He remembered being on the sill and that someone got hold of him, and that somehow his feet touched the ladder. In reply to Mr. Wallace he said he now knew that if they had used their axes they could have broken down the framework of the window, but he had had no previous experience of breaking down cast-iron window-bars.

Charles Napier Hake, F.I.C., of Great Smith Street, Westminster, who was called in by the firm as an expert, then put in a report as to the probable cause of the fire. He said he had given exclusive attention to explosives, four years as chief assistant in Dr. Dupré's laboratory, and for the last six years as consulting chemist and explosives expert. He had carefully read and considered the transcript of the shorthand notes of the evidence and the letters which had been put in. He had received tabloids from the firm on October 8, and had made various experiments with chlorate mixtures, which he reported on as follows:—

Experiments with voice tabloids.—Six tabloids heated separately over a Bunsen flame on a platinum lid. Tabloids melted and decomposed; in no single instance was there any tendency to inflammation or explosion. Tabloids placed on platinum lid and brought into direct contact with flame melted without inflammation. Several tabloids were ground up into a very fine powder and dried in a water-bath at a temperature of 200° F. A portion spread on wooden floor, and struck a sharp glancing blow with a wooden mallet

decrepitated slightly on two occasions. No spark or flame was observed. A portion spread on wooden floor and struck under the same conditions, with a mallet made of untanned hide. Same results as last experiment. A portion spread on floor and struck with the heel and sole of boot. No decrepitation was caused, although this experiment was repeated several times.

The above experiments were repeated under conditions of temperature similar to those of the drying-room of the factory, where the fire is supposed to have originated. A piece of floor-boarding was kept at a temperature of over 100° F. for about thirty minutes. The mallets and the dry powdered tabloids were kept at the same temperature for the same length of time.

Under these conditions, it was observed that the powder decrepitated somewhat more easily, that is to say, the decrepitations were more frequent than when striking the powder under ordinary conditions of temperature. In no case, however, was a spark or flame produced. Striking the powder with the heel and sole of the boot (which had not been previously warmed) produced no effect whatever.

Some of the dry powdered tabloids were filled into the crevices of the wooden floor in the laboratory, the space so filled being about 6 inches in length. A wax match was stuck in the same crevice, with the head resting on the powder. On drawing the sole of the boot across the head of the match it ignited, and the fire spread rapidly along the crevice containing the powder. This experiment was repeated four times, with the same result.

Some dry powdered tabloids placed between two sheets of paper. The corner of the paper was set fire to, and as soon as the flame came in contact with the powder combustion increased rapidly, and the paper was consumed.

These experiments were repeated with mixtures of dry powdered tabloids and dry floor dust. The proportions taken were—firstly, 90 parts tabloid powder to 10 parts dust, and second, 80 parts tabloid powder to 20 parts dust. Except that the dust had a somewhat deterrent effect on the inflammation, the results were similar to those recorded above.

Lastly, experiments were made with mixtures of chlorate of potassium and sugar, the object being to see which proportion of these ingredients was most favourable in order to produce a detonating mixture which would be accompanied by sparks or flame when struck with a mallet. It was found that a mixture of 90 per cent. chlorate and 10 per cent. sugar in a dry and finely powdered condition, when spread on a wooden floor and struck with a leather mallet, detonated with a copious production of sparks. A mixture of 80 per cent. chlorate and 20 per cent. sugar under similar conditions and treated similarly resulted in loud detonation accompanied by flame.

Mr. Hake added: In consideration of the above experiments, which were carefully carried out and several times repeated, I am of opinion that the tabloids, as manufactured by you, are non-explosive and non-inflammable. That, although one cannot say it is impossible, yet, in my opinion, it is highly improbable that the fire was due to friction exerted directly on tabloid powder, either contained in the crevices of the floor-mixed with dust or lying on the floor, but that it might have been caused through the medium of a match. On the other hand, it is difficult to conceive how the ignition of a quantity of powder sufficient to cause such a sudden conflagration could occur without the attention of the person who caused it being attracted by it. One would expect a fairly loud detonation from the explosion of a match; a hissing noise always accompanies the ignition of a mixture of chlorate and any combustible matter; and a small quantity of powder, if ignited by a match, would burn very violently for a short time only—possibly sufficiently long to ignite the woodwork, but then combustion would proceed comparatively slowly. Considering that the lowest drying tray was about 18 inches above the floor, it appears improbable that the fire should have communicated from the floor to the tray during the short time which elapsed between the exit of Copeland from the drying room and his return, when he observed the whole place in flames. Of course, if paper were lying on the floor in a favourable position the flame might have communicated with the tray in a comparatively short space of time, but, as far as I can see, there is no evidence to show that this was the case.

As regards the suggestion that the fire was caused by the concentration of the sun's rays on the paper covering the tabloid powder on the trays, it appears to me that the conditions were not unfavourable to this theory. It is well known that fires have not unfrequently originated from such a cause, and the facts that the day on which the fire occurred was a very warm one, that bottles of thick glass were standing on the window sill, possibly wet, and that the panes of glass in the window were thick and uneven, would all point to a possible explanation in this direction. I understand from Mr. Wellcome that the paper used for covering the tabloid powder while drying on the frames was used over and over again for the same purpose. Under these circumstances the paper would, no doubt, absorb moisture from the wet powder, and would in time become more or less saturated with chlorate of potassium in a very finely divided state. The result of continued exposure of such saturated paper to heat would be to render it more sensitive to an increased elevation of the temperature than paper not so treated.

If the fire originated in the paper covering the chlorate, the suddenness of the outbreak and the rapidity with which it spread would be conceivable.

Your instructions addressed to Dr. Smith which relate to precautions against fire show, in my opinion, that you adopted measures which are quite unusual in factories of a similar nature.

Mr. Hake was examined at great length in reference to this report.

A report was next put in by Mr. John Moss, F.I.C., F.C.S., manufacturing chemist, and formerly Demonstrator of Practical Chemistry to the Pharmaceutical Society of Great Britain.

To test the probability of the suggestion that the fire might have been caused by ignition of dust by Copeland's boots, Mr. Moss had prepared a mixture of chlorate of potash and sugar, more sensitive than any of the mixtures in the drying room where the fire originated. He also procured a piece of timber which had for many years formed part of the floor of a drying room. He strewed some of the mixture on this timber and endeavoured to ignite it or draw a spark therefrom by striking and rubbing with the heel of Copeland's boots, but entirely failed. He also failed with chlorate of potash when mixed with dust obtained from the floor of a drug warehouse and carefully dried. He repeated the experiment with chlorate of potash alone, with "voice tabloids" reduced to a powder, and with potash and borax "tabloids" reduced to powder. He failed in each case.

A spark from a match-head was easy to obtain, but it was improbable that such a spark could start under a boot and set fire to a substance raised some twelve to twenty inches above it on a rack. He had succeeded in detonating chlorate of potash and sugar, and, less easily, powdered voice "tabloids," by spreading the powder on a stone or board and striking smartly in a slanting direction with a piece of dry hard wood. He also succeeded, but with much greater difficulty, with chlorate of potash and dust. In every instance the effect was confined to the particle struck, and did not spread to the particles in contact with it.

With regard to the suggestion referring the origin of the fire to solar heat, it was a matter of common knowledge that paper and wood can be ignited by intense sunlight, produced by bringing the sun's rays to a focus by means of a lens such as a burning-glass, a double convex eyeglass, or by a lenticular body such as a bottle or carboy, or a corresponding inequality in the glass of a window. Platinum and quartz had been melted by the sun's rays in the focus of a plano-convex lens, and Buffon, the celebrated French naturalist, succeeded in setting fire to timber at a distance of 80 to 90 yards by concentrating the sun's rays upon it.

Mr. Moss added, "it has been stated in evidence that the day of the fire was exceedingly hot, and also that the chlorate of potash and the "voice" powder lay in the track of the sun's rays. Both these substances will cause ignition when in contact with organic matter such as paper at a temperature below the igniting point of paper alone, and it is not unreasonable to suppose that the paper covering one of them or on which it lay became ignited by the focussing of the sun's rays by ripples in the ancient glass which was in the window. The fact is certainly possible, and to my mind, taking all the circumstances into consideration, is even highly probable.

"I have had experience of several drying rooms, especially in the manufactories of wholesale druggists, and from the description given to me by Mr. Wellcome of the one in which the fire originated, as well as from the plans which I have seen, I am of opinion that it was well arranged in the usual manner.

"I have read the letter of instructions sent to Dr. Smith by Mr. Wellcome, and am of opinion that the precautionary measures therein ordered relative to the use of matches, and the provision that all whose duty takes them to the drying room shall wear list or rubber-soled shoes, are unusually stringent."

Mr. Henry S. Wellcome said there was a great deal of machinery on the three floors. Every precaution was taken to guard against fire, and extinguishing appliances were kept on the premises. The premises and effects were insured to the extent of 7,000*l.*, which would not cover the loss. There were rigid rules as to matches and lights, which were framed in consequence of a trifling fire which occurred some eleven months ago. A hose was kept attached to a cistern containing 1,600 gallons of water, buckets were kept constantly charged, and hand grenades were fixed all over the premises, but after the result of this fire they were not likely to use any more of them. Unfortunately no one thought of using the hose (he was absent at the time), but they contented themselves with the grenades, which proved useless.

By the Coroner: He saw no difficulty in hands being saved by a lift. This appliance was constantly used for the purpose in hotels.

Mr. Howick, the foreman of the jury and a member of the local board, said that outside staircases would no doubt be very useful in a case of fire, but the board had no power to insist upon their being built, nor had the district surveyor.

The Coroner summed up at great length, regretting that it was not in the power of the local authorities to enforce better provision for saving life by fire, and commenting on the fact that it was a regulation that fire-escapes should not be used by day.

Mr. Simonds explained that no blame attached to Engineer Howard for not using the escape, as firemen were not called upon to use them during the day, when they were locked up.

A Juryman: Therefore, fires may take place all day and people may be burnt to death all day.

Mr. Simonds further explained that to keep fire-escapes at hand all day would entail an additional cost of, say, 20,000*l.* per year, and they had not men enough to spare at present to have them in use save at night.

The Coroner thought they were needed as much by day as by night.

The jury returned the following verdict:—"We find that the cause of death was suffocation. As to the cause of the fire, we are of opinion that Copeland was primarily the cause of the fire, but there is not sufficient evidence to show in what way it was caused. Death was accidental. The jury are of opinion that further powers should be conferred on the inspectors of factories to enforce proper and sufficient means of exit, &c. This should include the power of enforcing the enclosing of the principal staircases. The jury deeply regret the death of Jacobs, and highly commend Ashby for standing by his comrade until fire forced him to leave, and express their high approval of the conduct of Francis in rescuing Ashby. They also consider Pritchard worthy of commendation. The jury take this opportunity of thanking Messrs. Burroughs & Wellcome for the assistance they have rendered them generally during this most difficult inquiry. They desire to suggest that a man should be allowed during the day to work the fire escapes as well as at night, and also that a steam fire-engine should be placed in this district, considering the large factories and the extent of the neighbourhood."

The Coroner hoped the finding of the jury might have a tendency to strengthen their hands, and concluded by saying he would lose no time in laying their various suggestions before the proper authorities, adding that the public ought to be much indebted to them for the great length of time which they had given to the inquiry.

INSECT-POWDER recently caused the death of a little girl, 2 years old, in Montreal. She had eaten about half an ounce of it.

THE PARIS EXHIBITION.

(ELEVENTH NOTICE.)

IN THE MACHINERY GALLERY.

THE exhibits of distilling and evaporating apparatus and vacuum-pans sent in by the firm of EGROT, 23 Rue Mathis, Paris, and specially designed for pharmaceutical laboratories and soap-factories, take up an enormous amount of space in the Machinery Gallery. Other exhibits of the same firm, such as steam cooking-stoves for hospitals, plant for liqueur-manufacturers, confectioners, and wine-growers, are spread throughout the Exhibition; while the firm's cooking-apparatus is also in use at the restaurants on the Eiffel Tower. But, perhaps on account of the multiplicity of his exhibits, M. Egrot at no time during the visits of our representative had anyone in attendance at his stand in the Machinery Hall to explain the special advantages of the apparatus there on show. We therefore passed on to the stand of EDOUARD A. BRÉHIER, 52 Rue de l'Ourocq, Paris, whose exhibits appeal specially to pharmaceutical manufacturers, soap and varnish-makers. Copper pans for evaporating appear to be one of the specialities of this firm. An apparatus for concentrating in vacuo is in operation at this stand, which contains some features of interest, inasmuch as the condensation takes place past the head of the apparatus, and the water of condensation cannot, therefore, find its way back into the extract, while a thermometer indicates the degree of heat of the water-bath, in a manner similar to that which we described in the case of Adrian's apparatus. The refrigerating process is carried on by a worm, the spirals of which form semicircles instead of circles, and which, on this account, is of a very compact size. In fact, it only occupies a small space at the back of the apparatus, leaving the front part free of access. Another noteworthy apparatus in M. Bréhier's exhibit is a syphon, which is always primed and ready for action, and may be withdrawn from one cask and introduced into another without being previously primed. A double tube in the interior of the syphon retains the liquid outside the cask, and thus keeps the small apparatus in constant readiness for use. The firm of ALFRED E. THIVET-HANCTIN at Saint Denis (Seine) shows several mixing, crushing, and powdering machines, some of which are intended for drugs and pigments; others, again, for heavier materials, such as quartz, cement, phosphates, and bones. The pulverisers intended for the powdering of drugs are of the usual kind, most of them working by means of a movement of balls attached to a rod, which, when set in motion, causes the balls to describe a circular motion along the surface of the copper vessel in which the materials for grinding or powdering are placed. This system is generally used for pigments which are ground wet, and other produce which has to be reduced to a paste-like consistency. Another system, by which one or two heavy balls, weighing $\frac{1}{2}$ cwt. to 1 cwt. each, revolve round a pivot in a closed chamber, is more cumbersome and expensive; while the process in which the pulverising parts of the machine remain fixed, while the vessel itself turns round and crushes the materials by forcing them into contact with the crusher, appears of a more or less antiquated character. JULES RÉTIF, 56 Rue des Culottes, Lyons, has a rather extensive show of water and other filters in class 64 of the machinery section, but there seem to be no new ideas introduced in this exhibit. The filters which would be fit to be employed for pharmaceutical purposes consist of a closed box in sheet copper or hammered copper, with metal-wire tubes, in which conical linen straining-bags are fixed, the pressure from above forcing the liquid through these strainers. The pulverising and sifting machines of the firm of CABASSON & Co., of Paris, though apparently of good workmanship and solidly made, also lack the distinction of novelty in their working. The system upon which they are constructed is that of a set of pestles which, by hand-power, are made to fall down into mortars with great rapidity. The shafts of the pestles are constructed so as to be able to turn round inside the tubes

in which they are placed. At the top they are provided with a mushroom-shaped cap, and each revolution of the shaft which communicates the motive-power gives a push to this mushroom top. The pestle thereby acquires a rotary motion, which causes it to fall on the materials for powdering with much greater force than could be obtained by a perfectly perpendicular action. Substantially the same idea is carried out in Beyer's powdering-machine, which we described a few weeks ago.

Messrs. LAUGIER & MARTIN, of Toulouse, show a large exhibit of filters for heavy liquids, oils, syrups, liqueurs, wines, &c., the chief feature of which consists in the fact that, like the filters of Rétif, the straining-bags are suspended from metal-wire baskets, and that each complete apparatus shown contains a large number of these baskets. The liquid for filtration, however, unlike that in the Rétif filters, passes through the bags without any other pressure than that exercised by its own weight. The straining-bags are made of different material for every kind of liquid which it is intended to pass through them. The firm of A. BUHRING & CIE., Paris, also exhibit some filters which would be useful for filtration processes conducted on a large scale. The system which forms the basis of these filters is that known as the filter-press, in which the straining-bags containing the unfiltered material (in this case usually of an oleaginous nature) are pressed by grated metal discs and other discs heated by vapour, the discs being pressed horizontally and placed opposite one another, so that the filtered oil flows away from each filter separately, instead of spreading from the topmost filter on to the one hanging below it. The discs in the filters under notice, however, are not heated, and they are made of wood instead of metal, and may, therefore, be used for liquids which would be injuriously affected by contact with a metal surface. The filtering process is carried on in bags of closely-woven material, and is greatly accelerated by pressure.

The eminent firm of PALAU & CIE., 43 Avenue du Maine, Paris, comes out very strong in machinery for pharmaceutical laboratories. The head of the firm was previously associated with M. Nègre, who is still his near neighbour, and of whose pill-making machines we have spoken in a previous article, but differences arose between the partners, each of whom is now working for himself, and in the same class of goods. Among the machines shown by Palau is a combined grinding and mixing machine for the manufacture of pill-mass, in which the latter, first made into a rough dough, is mixed and ground between granite rollers until it becomes a perfectly homogeneous paste, through which the medicinal principle has been quite equally distributed. These machines may be had in a small size, with two rollers of about $3\frac{1}{2}$ inches in length, to be screwed on an ordinary laboratory-table, or on a cast-iron stand in a much larger size, with two or three rollers of about 16 inches in length, for larger factories. A machine for dividing the pill-mass is also shown, in which the finished mass is very equally divided by being rubbed between two grooved metal plates. This machine is furnished with various sets of plates, each of differently-sized grooves. From this instrument the pills are placed in the coating-machine, one of which for giving the pills a silver-coating is also on show at Palau's stand. It simply consists of the usual arrangement of a glass or metal receptacle, to be worked by hand or steam power, in which the pills are thrown rapidly round in contact with silver filings. A small-sized machine will coat about 1 lb. of pills at each operation, and a large one about 5 lbs. For making dragées the usual machine, much affected by confectioners for coating sugar almonds, is employed. It consists of a copper vessel revolving in an oblique direction round its axis, and heated externally by a jet of steam. The pills are sprinkled from time to time with a solution of sugar, which is quickly dried by the hot temperature in the vessel. A centrifugal

ventilator, put in motion by the machine itself, removes the vapour accumulating in the vessel by the drying-up of the saccharine solution. The confectioners usually pour the syrup on the material from a conically-shaped container, which moves backwards and forwards in the vessel, and constantly drops liquid upon the material, but, unless in large factories, this arrangement is not generally used in the pill-making industry. Another machine at work at this stand is that for manufacturing capsules, in which two soft layers of starch are pressed together between bronze plates containing numerous hollow spaces of the same shape as the capsules. Before bringing the two layers of starch together, the powder, liquid, or paste which it is desired to form into capsules is inserted into the space between them, and by the sudden pressure of the bronze plates this material is thrown into the hollow spaces, which are left intact between the two layers of starch. The capsules thus formed can be easily detached from the metal covers, and then cut asunder, while the starch trimmings may be used again, unless an absolutely colourless covering is necessary. This second use is generally confined to opiates, and after this the trimmings still left may be used, for the third time, for tar capsules. The pill-stamping machines which are also made by the firm of Palau have already been described, and the pulverising-apparatus, shown by the house, for grinding and powdering seeds, salts, gums, &c., does not call for any special comment. It is made both on the horizontal and on the vertical principle.

IN THE CHEMICAL COURT.

In respect to intrinsic value and scientific interest, the next group of exhibits which may be considered is that comprising

ALKALOIDS AND ALLIED SUBSTANCES,

and we may say at once that this group is one of the best tributes to the advanced position of French technical chemistry. This fact is in keeping with tradition. To France we owe most of the brilliant discoveries in alkaloidal chemistry; and it is noteworthy that in regard to the one alkaloid, morphine, with which the names of British chemists are more closely associated, the French exhibits are comparatively poor. The fact is that Great Britain controls the morphia industry, and none of our manufacturers have participated in this Exhibition. They have missed an unequalled opportunity. Germany is in a similar position, so that Italy is the only one of the principal European nations which makes any attempt to rival France in alkaloids. In the Italian section one cannot miss the elaborately-carved case containing the manufactures of the *FABBRICA LOMBARDI PRODOTTI CHIMICI*, Milan. The exhibit consists of over one hundred specimens of salts of the cinchona alkaloids, derivatives of the alkaloids, and cinchona acids. A magnificent crystal of bichlorhydrate of quinine, weighing, we should think, 8 ounces, is one of the most notable specimens, and it is typical of the excellence of all that are shown. Specimens of cinchona bark help to relieve the style of the exhibits, and specimens of galenical preparations show that the company do not confine themselves to chemical operations. Moreover, samples of other chemicals, amongst them antifebrin, potassium iodide and bromide, iodoform and bismuth subnitrate, show the enterprise of the firm in another direction. The exhibit excels—if that be possible—the one made by the same company at the Italian Exhibition last year. The quinine industry is one of the best represented in the French section, and the name of the discoverer of the alkaloid finds a place in association with the exhibit of the *SOCIÉTÉ DU TRAITEMENT DES QUINQUINAS*, 18 Rue Malher, Paris, the direct successors of MM. Pelletier, Delondre and Levailant. In 1828 M. Armet de Lisle united the interests of these celebrated chemists in the factory at Nogent-sur-Marne, and after fifty years' existence the factory passed into the hands of the company, which is under the direction of M. Armet de Lisle, fils, M. Gibert, his son-in-law, controlling the commercial interests. The capital of the company amounts to 2,700,000 francs, the works at Nogent-sur-Marne cover an area of 4 hectares, and 120 persons are employed in them. The output of quinine salts amounts to about 800,000 oz. per annum. The exhibit of the firm does not occupy a large case in the Exhibition, but it is nevertheless of a complete character, and includes thirty-two salts of

quinine, twelve of cinchonidine, and nine of cinchonine. With these there is a sample of the new decolorant, "Noir Armet," a charcoal made from refuse cinchona, which is possessed of decolorising properties equal to bone-black. M. Armet de Lisle's discovery of the process for manufacturing this charcoal is a decided gain to technical knowledge. It provides, in the first instance, a profitable outlet for the refuse which otherwise has to be got rid of by payment, and the charred product should be in special request by those who have business with Jews and others whose religious belief, or caste, prevent them using articles which have been treated with animal charcoal. Other good exhibits of quinine salts and salts of the other cinchona alkaloids are made by L. ALEXANDRE TAILLANDIER, of Argenteuil, and E. LUCIEN VIENNOT, 4 Rue de l'Est, Ivry-Port.

In a general exhibit of pharmaceutical chemicals by DUBOSC FRÈRES & SUBERT, Rue Vieille du Temple, Paris, there is a collection of quinine salts in large specie-jars, neutral sulphate and valerianate, both in exceptionally fine crystals, being the foremost amongst them; but all are characterised by their good appearance and the excellent style in which they are shown. Scale preparations are also exhibited by the firm, and for these they deserve special mention, as this department is one in which French exhibitors are weak. There are few collections of alkaloids in the French Court which excel the magnificent exhibit made by DUQUESNEL & MILLOT, of 24 Rue Pavais, Paris. M. Duquesnel's work in connection with aconitine is well known. He has laboured long at the subject, and has given wide publicity to the results of his researches. As a reward Aconitine-Duquesnel is now regarded as a standard article, whose purity and potency is not excelled by that of any other manufacturer. It occupies a prominent place in the firm's case, together with large crystals of aconitine nitrate. Next to these specimens we might place those of eserine which are exhibited: there are three of these—one in small grey crystals, the largest of which will weigh about 2 grains; another specimen is green in colour, due to exposure to the light, and the crystals are so very large—say from 5 to 25 grains in weight—that one is apt to be sceptical about their identity. On this point, however, we are able to state that there is no doubt. M. Duquesnel having informed our representative that the specimen had been specially made for the Exhibition, and he could not pretend that such eserine would ever be produced for commercial purposes. The eserine which his firm sends out is in small granular crystals, not unlike the greyish salicylate which is shown. The difficulty of obtaining eserine and its salts free from colour is well known. Petit showed about fifteen years ago that the slightest trace of alkali changes the colour of its solutions from yellow to blue, and it is generally assumed that volatile alkali is the cause of the change in the solutions used for opthalmic purposes. But this is erroneous. The subject has also been studied by M. Duquesnel in a very precise manner, and he has shown that between eserine itself and the final blue product obtained through the influence of alkalies there is a red body, capable of crystallisation, to which he gave the name of *Rubreserine*, and he believes it to be the product of the first stage in the oxidation of eserine. Ample proof of this explanation has since been given, perhaps none so practical as Saul's method of preventing the coloration of eserine solutions by the use of infinitesimal quantities of deoxidisers—hypophosphorous acid being the most effectual. With these facts in mind it is interesting to observe that the firm exhibit specimens illustrative of Duquesnel's research, the best of four being rubreserine in fine crimson plates, the others being blue, green, and red amorphous masses, typical of different stages of oxidation. With these before us the reason for the coloration of eserine crystals is obvious, and the green colour of the largest crystals is not surprising. Other triumphs in alkaloid production are shown by the firm, and, at the risk of reducing our report to a mere catalogue, we cannot resist the temptation of naming a few of the unique specimens, viz.:—Veratrine (small greyish white crystals), absinthin (a few grammes of this bitter principle in distinct crystals), duboisine (cream-white crystals), digitalin (colourless crystals), hyoscyamine (in good-sized crystals), and several others, which are chiefly remarkable for the size of the crystallisations. In addition to the pure chemical products the firm also exhibit beautifully coated granules and perles of the potent remedies.

The next exhibit which may be examined is a conjoint one by F. NARCISSE GALLOIS, of Villepreux, and ERNEST HARDY, 90 Rue de Rennes, Paris, whose names are familiar in connection with many modern researches in pharmacology. These chemists have, for example, done in France what Fraser has in this country in connection with the chemistry of strophanthus; and it is not exaggeration to say that to them is due the credit of showing how strophanthin can be produced commercially. The result is that strophanthin may fairly be considered a French product. It is well known that these investigators are somewhat at variance with Fraser in regard to the chemical constitution of strophanthus, but this is not the place to discuss that point. They naturally place strophanthus and its active principle in their exhibit, and although, as a whole, it is a small one, it is most interesting. For example, there is in it a specimen of pilocarpine, made synthetically by the process which Hardy and Calmels first used two years ago, and which we described at the time; also an exceptionally good specimen of erythrophloeine, and a large assortment of the salts of anagyrine, an alkaloid ($C_{11}H_{19}NO_4$) isolated from the seeds of *Anagyris foetida* by Reali two years ago. The leaves of this drug have long been used as an aperient in Greece and Cyprus, under the name of "False Senna." Close beside this exhibit is another, which also may be taken as a concrete record of personal achievement in chemical and pharmaceutical research. This is the collection placed in the court by C. J. TANRET, 14 Rue d'Alger, Paris, which includes specimens of active principles and salts discovered or first prepared by him during the past dozen years. Amongst these the double salts of caffeine (caffeine and sodium benzoate, cinnamate, and salicylate) from the utility point of view rank, perhaps, as high as anything else in the case, for until Tanret made them it was impossible to prepare an aqueous solution of a caffeine salt, all splitting up into caffeine and free acid when treated with water. Hence hypodermic solution of caffeine was practically impossible. These double salts of Tanret's are soluble in about twice their weight of water. They are very simply made—viz., by dissolving pure caffeine in its equivalent of an alkaline salt—acetate, benzoate, citrate, and salicylate of sodium being best adapted for this purpose. Thus Martindale's formula for *injectio Caffeina hypodermica*, based on Tanret's observations, is as follows:—

Caffeine	20 grains
Sodium salicylate	17½ "
Distilled water	1 drachm
Dissolve:	

Three minims of this contain 1 grain of caffeine. Tanret has also done excellent work on ergot. We cannot say that he has simplified our knowledge of this exceedingly complex drug, but he deserves the credit of having discovered the only active principle which has ever come into fairly general use in medicine—viz., ergotinine. The identity of this alkaloid has been disputed by several authorities, amongst them Dragendorff and Kohert, but Tanret has satisfactorily replied to their criticisms. The alkaloid is usually met with in the amorphous state, but it is shown in the Exhibition in crystals, which have become brown by exposure, this being a characteristic of pure ergotinine. The cholesterol body, ergosterin, isolated from ergot by Tanret about a year ago, is also exhibited. We noticed, too, the bitter, aromatic, and colouring principles of bitter-orange peel; pelletierine (active principle of pomegranate bark) and its derivatives and salts; vincetoxin (soluble and insoluble), being the modifications of the glucoside isolated by the exhibitor from asclepias root; and a collection of terebinthinate bodies (azo-camphenes). The name of ADRIAN & CIE. has several times been mentioned in these reports, and once again we have to mention it. Their case in the French Court is divided into two parts, the first being devoted to medicinal chemicals, and the second to galenical preparations. The latter we have already spoken of. The collection of chemicals may be said to consist of alkaloids, glucosides, and terpenes. Of the first named we have acinetine in its two forms, amorphous and crystalline, eserine in crystals resembling Demerara sugar, and sulphate of sparteine in immense crystals. The atropaceous alkaloids and their derivatives are also exhibited. The glucosides include a large dish of milk-white crystals of digitalin, whose value

cannot be far short of 500%, together with the ordinary commercial product, and the associate bodies digitin and digitalin. There is also some good strophanthin, and even better quassin. Monochlorhydrate and dichlorhydrate of terebinthin give a start to the terpene products, of which there is a good selection in the case. There are also some rare and unique specimens of chemicals in the exhibit of E. GENEVOIX & CIE., Pharmacie Centrale de France. This is a composite exhibit representing the departments in which this reputable house manufacture. The most striking objects in the case are potassium permanganate in 6 inch crystals, ethoxy-caffeine in pyramidal crystals fully half an inch square, and a number of alkaloidal iodides in definite crystals. Eserine seems to be the universal subject of attack amongst French chemists. Again we come to a beautiful specimen of it in the Pharmacie Mialhe exhibit (E. ARTHUR PETIT, 8 Rue Favart, Paris). This one rivals somewhat Duquesnel's specimen, but the crystals are not quite so large. They are in plates about ¼ inch square, and are almost colourless. M. Petit (who should not be confounded with M. Paul Petit, a participator in the "Exposition Collective") has done some special work on Calabar bean, and it was he, we believe, who experimentally demonstrated the superior richness in alkaloid of the seeds of *Physostigma cylindrospermum*. Lately he has turned his attention to

SYNTHETIC PRODUCTS,

and has done some good work thereon, notably the manufacture of analgesine (French for antipyrin). Of this he shows a specimen, and also of the following allied bodies:—Antithermin (plates ½ inch square); methacetin (acet-paranisidine), in fine white crystals; and the isomers paranitroanisole, paranitrophenol, paranitrophenetol, and acetparaphenetidine (phenacetin). These are excelled in interest and rarity by the fine crystalline masses of synthesised cocaine, which are also shown, together with benzoyl ecgonine, and a number of cocaine salts. H. FOURNIER & CIE., 19 Rue Jacob, Paris, have a similar exhibit of synthesised antipyratics. For instance, there is a fair specimen of acetyl-phenylhydrazine [$C_6H_5(NH).CH_2CO$], which, under the name of pyrodon, and later as hydracetin, has acquired greater notoriety than reputation as a medicine. Acetanilide (antifebrin) is also shown, as well as the isomers of its derivative exalgine (methyl acetanilide). The relationship is shown by the following formulae:—

Antifebrin	$C_6H_5NH_2CH_2CO$.
Exalgine	$C_6H_5N(CH_3).CH_2CO$.

The *ortho*, *meta*, and *para* isomers of methyl acetanilide are shown, in spite of Giraud's statement that there are no such modifications of the compound made by the action of acetylchloride on monomethyl aniline. The exalgine which Bardet and Dujardin-Beaumez recently eulogised as an antineuralgic is so prepared, as was shown by Professor A. W. von Hoffmann fifteen years ago. Giraud maintains that the phenyl radicle of the exalgine molecule is not substituted, and this is shown by the formula which we give. Nevertheless we have the three forms in Fournier's exhibit, and they differ only in their appearance, the *ortho* compound being distinctly crystalline and the others less so. Acetylbenzylamide, a crystalline body of the same composition, is also shown. In every respect the most important part of this exhibit is that devoted to chloral and its compounds. In the centre of the group is a globular flask containing "hydrat de chloral, Follet," which has crystallised in a magnificent foliated mass, whose beauty is indescribable. There is a similar flask of ethylate of chloral, the crystals of which are more silky. The methylate is also shown, as well as pure chloral and the solid polymeric modification, metachloral, which, strange to say, is best made from the impure article. Of new combinations there are chloralurethane, recently introduced as a hypnotic under the name of *uralium*. A specimen of "chloralimide" (a compound resembling Epsom salts in appearance) recalls the most recent hypnotic chloralamide, but we judge from the name that Fournier's body is a secondary amine; still we take it that the German discovery was practically anticipated by Fournier? There are other chloral compounds, notably chloralide and "chloral antipyrin." The exhibit also includes a number of quinine salts, and a collection of capsules, perles, and pills.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

METHYL-FURFUROL, according to M. Maquenne's later experiments, is a regular product of the action of the sulphuric acid on iso-dulcitol, a constituent of seaweeds, while furfural is derived from the splitting of raffinose under the same circumstances.

PHYSICIANS AND PHARMACISTS IN THE NEW PARLIAMENT.—The coming Chamber of Deputies will contain 48 physicians, among whom we may mention Drs. Chauteamps, Chassaing, Marmottan, de Lanessan, Clemenceau, and Camille Raspail; 4 pharmacists, namely, MM. Boudeville, César Duval, Alfred Lecomte, and ex-Minister Peytral; one veterinarian, Dr. Pajot; and one chemist, ex-Senator Naquet.

NAVY PHARMACISTS.—A new decree provides that henceforth young men admitted to the Naval School shall enlist for three years, and for six years besides in the navy from the date of obtaining the grade of navy physician or pharmacist of the second class. Another decree establishes as follows the equivalent grades in the naval health service: Medical or pharmaceutical director, intermediate between colonel and brigadier-general; physician or pharmacist-in-chief, colonel; physician or pharmacist-principal, major; physician or pharmacist of the first class, captain; of the second class, lieutenant.

THE LYONS MILITARY HEALTH SCHOOL.—A hitch has occurred in the erection of the building promised by Lyons on condition that she should get the new school. The plans proposed by the city council, and approved by the War Minister, will entail, it now turns out, an expenditure of 3,000,000*f.*, exclusive of ground. The municipal council's financial committee only provided for a two and a half million loan. Lyons has engaged herself with the State to complete the building by November 1890, and the city authorities are casting about for ways and means to get out of the quandary. Some propose that the architect's estimates be cut down; others are of opinion that the lacking half-million could be raised. Any way, no one doubts that the school will be finished in time.

AIMING AT AN EMPEROR AND HITTING A CHEMIST.—On last Thursday a suspicious looking parcel, addressed to the German Ambassador, was picked up near the Embassy door, and sent by the frightened attachés to the Municipal Chemical Laboratory for investigation. There it was found to consist of a small box containing a few revolver cartridges and some offensive remarks addressed to H.M. the Emperor of Germany, but no device to cause explosion or any damage. In fact the whole affair was simply a stupid joke, which, however, proved serious to three men employed in the laboratory. A report of the occurrence having appeared in the *XX^e Siècle*, Director Girard's special abomination, M.M. Padé, a chemist-principal, and Godin and Mormat, clerks, were summarily discharged for having violated professional secrecy—an accusation they deny emphatically.

CHEATING NICE OUT OF TOWN-DUES.—The town of Nice, which imposes higher dues on stearic acid than tallow, having good reason to suspect that quantities of stearic acid were mixed up with tallow and smuggled in at the lower rate, called upon chemist Henri Taffe to devise a convenient process for detecting the fraud. The following method, based upon the evaluation of free fatty acids, has been found to answer all practical purposes. Five grammes of the fat are dissolved in 10 c.c. of good olive oil, by means of a gentle heat; when cooled down to ordinary temperature the mixture is introduced into a flat-bottomed flask, together with 20 c.c. of rectified alcohol and one drop of tincture of turmeric, and while the flask is briskly shaken with a circular motion, a volumetric solution of caustic soda is cautiously added to saturation, note being taken of the quantity employed. Considering that ordinary tallow contains on an average 3.06 per cent. of free acid, and olive oil 2.5 per cent. by actual estimation, while stearic acid corresponds to 100 per cent., it is easy to calculate the proportion fraudulently added. In the case in question the alleged tallow proved to be nothing but stearic acid.

Trade Notes.

THE gold medal awarded at the Paris Exhibition to Messrs. Edw. Cook & Co., of the East London Soap-works, Bow, was given for their antiseptic soap and lightning cleanser.

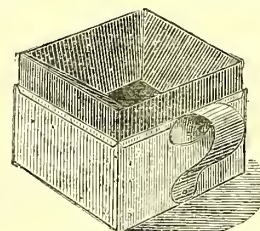
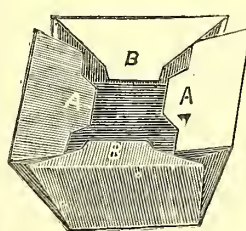
MESSRS. F. SCHUTZE & Co., of 36A Aldersgate Street, E.C., have issued a new illustrated price-list of druggists' sundries, surgical appliances and instruments. It contains ninety-six pages, about half of which are illustrations.

THE report on the working of the *Farbenfabriken*, vormals Friedr. Bayer & Co., Elberfeld, states that the results of the company's trading during the first half of the present year have been exceptionally satisfactory, and the prospects for the future are of such a nature that the dividend for 1889 is likely to at least equal that declared for 1888, notwithstanding the recent increase in the share capital.

MEDICAL DIARIES.—Messrs. Burroughs, Wellcome & Co. tell us that they have in the press an improved edition of the medical diary which they have for several years published at Christmas time. The 1890 diary will be of superior get-up, and will be produced in two forms, one to sell at 2*s.* 6*d.*, bound in morocco, and the other bound in silk and inserted in a pig-skin letter-case, to sell at 4*s.* 6*d.* The publishers offer these on special terms to chemists, and as the diaries are just the thing to sell or present to doctors at Christmas time, those who are interested should make early application about them.

EXTRACTUM SENNÆ LEGUMINUM LIQUIDUM.—It has been known for a very long time that the legumes, or pods, of the senna plant are an active cathartic, and have been employed medicinally, but we believe that medical men generally have not been aware that the pods present distinct advantages over the leaves. Dr. Macfarlane has recently called attention in the *Lancet* to the superiority of the pods, claiming that they neither possess the nauseous taste of the leaves, nor do they produce griping. Acting upon his suggestion Messrs. Rankin & Borland, of Kilmarnock, N.B., have prepared a liquid extract of the pods, and they have submitted a sample of it to us. This preparation is of a superior character, is free from the "drug" taste of the leaf extract, and causes absolutely no griping. We can only compare it therapeutically with *casarea sagrada*, to which it is likely to prove a formidable rival.

SANITARY CUSPIDORES.—Messrs. Seabury & Johnson are introducing this novelty into this country, and are sole agents, we believe, on this side for the invention in its various forms. The "cuspidores" illustrated below—and especially



suitable for chemists' sale—are spittoons for invalids and for hospital use. They consist of a metallic frame, and of waterproof cartons, ready folded, and which easily fit into the frame, forming at once a light little square box, easily held by the patient, and with a wide inner flange. Instead of having to clean out a mug or other spittoon, the nurse simply burns this carton and inserts another. A frame, with a neat little bundle of cartons, can be sold with a good profit at 1*s.*, and extra frames and cartons can be had very cheap. Now that medical men are recognising that the expectation of patients suffering from tuberculosis is likely to spread the disease, this invention will have a special interest. Ordinary spittoons, on the same principle, are sold by the same firm, only in this case the cartons are fireproof. Another development of the idea is a vessel adapted for passenger vessels, to replace the basin so familiar to Britishers when they seek a foreign strand. The new carton vessels are already adopted by most of the Atlantic lines.

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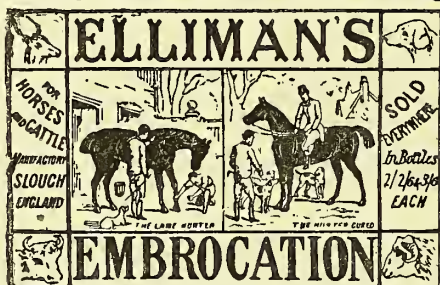
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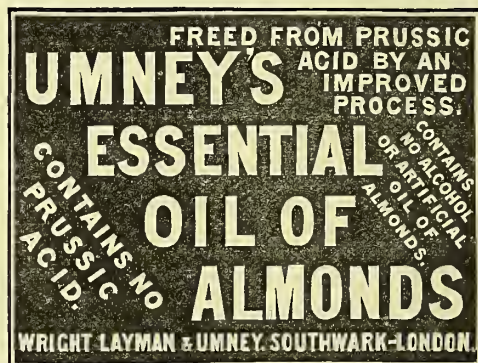
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See Illustrated Advertisement in the First
 Issue of the month.

SILICATED CARBON FILTERS

AERATED

PATENT MOVABLE BLOCK.

See Advertisement, page 23 (bottom folio).

*Fletcher's
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See DIARY, 1889,
 Pages 17 and 18.

EDITORIAL NOTES.

**RAILWAY RATES FOR CARRIAGE OF
 GOODS.**

THE Board of Trade has at last set to work on the gigantic task which has been allotted to it by the Railway and Canal Traffic Act, 1888. That Act was passed mainly in consequence of complaints against the railway companies of undue preference given to traders of one district over traders in another. The railway companies said in effect that they had no desire to give undue preferences to anybody, but

that greater demands enabled them, or that greater competition compelled them, to give advantages to one district which they could not give in another, and the Railway Commissioners found that their powers were not sufficient to deal with all the disputes which had arisen under the previous Act of 1854. The new Act, therefore, reconstitutes, enlarges and defines the powers of the Commissioners; then it provides for a new classification of goods; next it aims to expound, or rather make it possible to expound, undue preference; and, lastly, it deals with canals. The first duty it imposed on the railway companies was the preparation of a new classification and scale of maximum charges; persons interested were to have facilities for objecting to the proposals of the companies; and the Board of Trade was to act as umpire, and afterwards submit its decisions to the final arbitrament of Parliament. The trading community of the nation has taken up the business of objecting with a vigour which has somewhat embarrassed the authorities, and, after some preliminary siftings, a first open meeting of the companies and their customers, or, as it would be more correct to say, of the companies and their antagonists, met at the Westminster Town Hall on Tuesday last. Lord Balfour of Burghley, the Parliamentary secretary to the Board of Trade, and Mr. Courtenay Boyle, assistant secretary, the railway department official of the Board, conducted the inquiry. The only object of Tuesday's proceedings was to settle the methods of the inquiry, but enough was then revealed to indicate the magnitude of the task. It appears, for instance, that some 1,500 sets of objections have been sent in; that the names of the objectors fill more than one hundred folio printed pages; a dozen counsel and a score of non-legal persons, secretaries and such like, were on hand, representing either the companies or the traders; and application was made, and consideration of it reserved, on behalf of an individual firm to be heard independently. The London and North-Western Company's classification is to be taken first, and, no doubt, discussion of that will clear the ground very considerably; but it will be far from settling all the points raised. It appears that the North-Western Company are prepared to make some concessions to the objectors, and these are to be announced later on. They will, no doubt, by this means clear the field of a good many objectors. Ultimately the conference was adjourned until October 29, 30, and 31, and it was agreed that the Great Western schedule should be the second schedule selected. It was stated that the Board of Trade will also hold sittings in Edinburgh and Dublin, and perhaps in Wales, with a view to the settlement of local difficulties.

The champions engaged for this fight are mostly well paid for their services, and will no doubt enjoy themselves. But what anybody else is going to get out of the controversy is problematical in the extreme. The companies, as carriers, are entitled to "fair and reasonable" rates. No commission or authority can possibly settle in advance what is a fair and reasonable rate under every conceivable circumstance or set of circumstances, so that a "maximum" tariff must be, and actually is, in the Act of Parliament adopted. The companies never have enforced the maximum rates to which they are by law entitled at present; they are not likely to do so in future; and how can discussion be profitably engaged when both sides have to allow for an unknown margin, elastic and undefinable? By the time the new classifications are authorised by the subsequent Act of Parliament prescribed, the expenditure on all sides will have been immense, and we imagine that, except so far as the course of trade induces modifications, there will be no appreciable advantage to the general body of traders on the one hand, or of railway shareholders on the other.

If anyone suffers it will be the small men, who will not be heard much about in the inquiry; for to him that hath shall be given, and from him that hath not shall be taken away even that which he hath.

THE UNQUALIFIED ASSISTANT QUESTION.

CORRESPONDENTS who undertake to instruct us on this topic should at least take the trouble to make themselves acquainted with the elements of the difficulty. "Multum in Parvo," for instance, tells us in an authoritative style that "the 17th section of the Pharmacy Act states distinctly that the unqualified assistant acts on behalf of the master, therefore his master is the seller. This must be apparent to any person capable of understanding." If "Multum" had read the 17th section with moderate care, he would have seen that the person on whose behalf the sale is made is responsible "for the purposes of this section." Persons "capable of understanding"—judges and that sort of people—take this to imply that outside the 17th section the seller has to take the responsibility of his own actions, and is not allowed to transfer it to his master.

"H." puts this poser:—

"Why did the Council of the Pharmaceutical Society apply to Parliament for powers to prevent branch shops being managed by unqualified men? If it is illegal, as it is alleged, for an unqualified man to sell poison, the Council could have dealt with the unqualified men under the existing Act, 1868. The fact of the Council drafting the Pharmacy Act Amendment Bill, 1888, was an admission that the present Act was inadequate to deal with unqualified men."

The Pharmaceutical Council did not make the proposal alluded to; it was introduced by the House of Lords into the Bill which the Pharmaceutical Council drafted, and it was not very welcome to the latter body. Indeed, they decided, after due deliberation—in *camera*, of course—not to re-insert the clause in last session's Bill. But it is not by any means inconsistent with the interpretation of the Act which has been indicated (let it be always remembered) by the most eminent legal authorities in the land. Its effect, if passed, would have been simply to add to the responsibility of the assistant, a risk to be imposed upon the master if he should place an unregistered man in a position which would give him control of a chemist's shop.

Another correspondent, and this is one who quite appreciates the points involved, contends that the legal interpretation of the Act now prominent is not what was intended by those who framed, or by those who passed, the Act. We think that the words quoted from the 17th section, "for the purposes of this section," dispose of that claim, though we quite recognise that to a great many people the acquaintance with the risk comes as a surprise. But this gentleman goes on to argue, "Let us have a new Act, and let all things be fair and equal. Let us clearly understand the basis on which we start." That would be very good, and the only remark to be made in reference to it is the very obvious one that a new Act, with all things fair and equal, is not the easiest thing in the world to get.

Meanwhile it has to be remembered that the old Act exists, and may any day be enforced. This is the point which we are trying to make evident. If a case comes before a court it will be decided, not in accordance with the wishes of chemists, nor with regard to anybody's recollection of the general opinion in 1868, but by the words set down in the statute. And no ordinary court is likely to oppose its own opinion to that expressed by the law lords, and re-

corded in the official reports. Another case comes forward this week. Battle's vermin-killer is sold by a youth of 17, and apparently the only other person in charge of the shop is an unregistered assistant. The formalities of registration were not properly observed, and the woman who bought the poison killed herself with it. In the event of a prosecution it will be of no avail for the chemist to claim the right to manage his business in the way he thinks best; the public may reasonably answer, "We have an Act of Parliament which declares that poisons shall only be sold by certain persons and in a certain manner, and we insist that that Act shall be obeyed." The Act belongs to the public, not to the pharmacist.

MORE ABOUT ESSENTIAL OILS.

FROM China in the East round the world to the extreme West of North America it seems to be the privilege of those who take up the examination of essential oils to discover something which has not been known before. Whether this is a characteristic of the oils or a peculiarity of individuals we shall not attempt to decide; but these discoveries become embarrassing, and their accumulation is now so formidable that it is contemplated to omit from our Pharmacopoeia the "constants" which are included in the "characters and tests" of certain essential oils. This is largely due to the fact that the different investigators either do not take the trouble to assure themselves of the authenticity of their samples, or they work by methods so different from each other that it would be unwise to seek for the truth in their results. We had an example of this six months ago, when the iodine absorption of essential oils became a topic of current interest. At that time we directed attention to the wide differences between the results obtained by three investigators, and suggested that these were due to the workers allowing the iodine and essential oils to remain in contact during different periods of time. The subject is recalled by a paper "On the Detection of Adulteration in Essential Oils," by Mr. Rowland Williams, of Manchester, which appears in the *Chemical News*. The iodine absorption test is really the important part of this paper, and it is for that reason that it is now referred to. There is internal evidence in Mr. Williams's contribution to this department of literature that his acquaintance with essential-oil bibliography is not extensive, and apparently does not include even the best-known pharmaceutical works and periodicals. It is amusing to notice the manner in which analytical and professional chemists solemnly traverse the ground which humble pharmacists have explored before them. Mr. Williams, for instance, tells us that "to the best of his knowledge the iodine absorption test has never before been applied to essential oils—at any rate, not to a large number of representative samples." Considering what Barenthin did on the subject in 1886, Davies and Snow this year, and even the modest work of Eck, Mr. Williams's statement is a little astonishing.

Turning to the work done, we find that the paper is based upon the examination of sixty samples, representing twenty-six of the most important essential oils of commerce. These were obtained from the largest dealers in essential oils, who were the actual distillers of the majority of the specimens. The factors determined in regard to the samples were:—

(1) Specific gravity at 60° F.; (2) the percentage of potash absorbed by boiling weighed quantities with seminormal alcoholic potash and titrating back with seminormal acid; (3) iodine absorption; and (4) boiling-point. There is no statement in the paper concerning the conditions under which the second, third, and fourth factors were determined,

so that the value of the results is seriously diminished. For instance, we are not told what solvents were used in the iodine absorption test, nor how long the reagent and oils stood together. Until we have uniformity in regard to these points the iodine absorption test cannot take rank as a reliable means for testing oils. The truth of this statement is clearly shown by a continuation of the contrast, which we made six months ago, of the results obtained by Barenthin, Davies, and Snow. We now add to the table the figures given by Mr. Williams, they being the mean of duplicate and triplicate tests:—

Oils	Percentage of Iodine absorbed			
	Barenthin	Davies	Snow	Williams
Anise	164	189	121	230
Bergamot	260	276	345	265
Calamus	155	181	—	—
Caraway	265	254	233	260
Cinnamon	100	189	—	115
Cloves	270	360	461	167
Fennel	140	153	—	—
Juniper	245	230	—	253
Lavender	170	270	286	237
Lemon	285	347	343	321
Pennyroyal	—	189	152	81
Rosemary	185	226	—	151
Turpentine	303	307	397	—

The new figures show even more strongly than ever that this test, as at present conducted, is of little value. One other instance adds force to this statement, viz. the oils of peppermint. Mr. Davies gave these particular attention in his paper, so did Mr. Snow, and Mr. Williams also has special observations in regard to them. We put the figures of all for these oils beside each other:—

—	Davies	Snow	Williams
American	121-143	70-110	53-71
Mitcham	49-57	—	36-46
Japanese	43	—	37-56

Like Mr. Williams, we "are unable to offer an explanation of these discrepancies." It is unnecessary to proceed with our analysis of each author's work much farther. All along the line there is disagreement, and little hope of deducing anything valuable from the figures.

In speaking of the oils of cinnamon and cassia, Allen says, in his "Commercial Organic Analysis," "No sharp distinction exists between the two oils, or one which would enable one to be detected with certainty in presence of the other." This statement is evidently based on Mr. A. H. Jackson's experiments, and Mr. Williams says it is contrary to his experience. "There are, indeed, several striking points of distinction between the two oils, and, judging from the results of my experiments, it is evident that here, again, chemical analysis would be useful not only in detecting, but also in approximately estimating the proportion of adulteration in the case of the admixture of oil of cassia or other inferior oils with the more expensive oil of cinnamon. When it is remembered that the value of good oil of cinnamon is at least a dozen times that of oil of cassia the importance of this fact can hardly be over-estimated." As the ghost of this statement may some day stalk between magistrates and persons charged under the Sale of Food and Drugs Act, it may be as well to mention that Mr. Williams's figure for cassia oil is 73, and Mr. Davies's 159; for cinnamon oil the former gives 115, and the latter 189. Upon which may we rely? And are analysts justified in accepting the final statement by Mr. Williams, to wit, "There can be no doubt that the difficulty, and, indeed, frequently the im-

possibility, which has hitherto existed of detecting the presence of adulterants in essential oils by means of chemical analysis has led to an increase in this form of fraud. It is, therefore, gratifying to know that, by the use of the methods of examination which have been indicated above, the purity or otherwise of many essential oils can be determined with certainty." We have said little regarding the potash absorption, for it is obvious to those who are acquainted with the reactions of essential oils that this is a factor which is constantly changing; moreover, there is no indication in the paper of what the figures are intended to convey.

THE U.S.P.

THE absorbing topic in American pharmaceutical circles at present is the approaching revision of the United States Pharmacopœia. By consent and custom, and not by legislative enactment, this Pharmacopœia is revised every ten years, and next year the present edition will have reached its allotted span. If we may judge from what is written about it, American pharmacists take rather a warm interest in their Pharmacopœia, probably because their representatives do the lion's share of the work. The last revision committee was presided over by a pharmacist, Dr. Charles Rice, and a movement is now on foot to make him the permanent chairman. There is but one opinion of his fitness for the post. He is qualified for it by long experience, a wide range of knowledge, and exceptional ability in bibliographic and practical research. The unanimity on this matter is almost equalled by that which prevails in regard to the shape which the next edition of the Pharmacopœia should take. By all accounts the present edition has not been the success that was anticipated of it. Some months ago we attributed this to the high price of the book, and suggested that a cheaper edition, similar to the British Pharmacopœia, would bring it into general use. Judging from the number sold, the U.S.P. is possessed by scarcely one in ten pharmacists in the States. This is an influence fatal to the existence of uniform medication, and it naturally follows that, in the absence of a recognised authority, retail pharmacists either make their galenical preparations according to self-selected standards, or depend upon wholesale manufacturers for their supplies. There is ample evidence that these conditions are the greater element in American pharmacy, and our suggestion that a cheaper and less voluminous Pharmacopœia would diminish the evil has been accepted heartily in the States as a practical remedy. There are other directions, however, in which improvement is demanded, notably in regard to weights and measures. Experience has shown that the exclusive use of the metric system of weights and measures in some parts of the volume is not popular, and it would be wise to adhere to the "part" system throughout the next edition. It is also alleged that the Pharmacopœia is too precise in some particulars, and that its true function as a book of prescriptions is lost in the tendency to explain matters, and to furnish information which is best given in text-books. These criticisms will probably be fully met if the book is made cheaper, and if the committee take the British and German Pharmacopœias as their models. The most valuable criticisms consist, however, of comments on the Pharmacopœia processes and text which have been made by public writers during the past eight years. We have already explained that Dr. Rice has been engaged in making a digest of the criticisms, and the first part was reviewed in this journal six months ago. The second part has now been received. It deals with the journalistic criticisms of the past two years, and also includes notes from such commentaries as Remington's "Pharmacy."

The refining tendency in modern medicine is delicately exemplified in this admirable book of notes. Thus, an Austrian gentleman proposes to make medicated waters by dropping the oil on sterilised filtering-paper, digesting with sterilised distilled water, using sterilised vessels, corks, &c., and closing the bottles with sterilised indiarubber corks. It is a pity that he stopped short there, for without a sterilised atmosphere the refinement is incomplete. Dr. Oldberg has been attacking the nomenclature and wording of the Pharmacopœia, and suggests some astonishing verbal refinements. For instance, he wishes to add "hydratis" to the titles of alkaline solutions, so that simple lime water would be changed from "liquor calcis," which deceives nobody, to "liquor calcii hydratis," or "liquor calcis hydrate," which would mystify many, and benefit none. The same critic raises a knotty point in regard to the meaning of "liquor"—if it means a solution of a solid in water, then "liquor gutta-perchæ" is a misnomer. We wonder what else in the world it can be? Precise nomenclature is a very good thing, but we hope that "spiritus ætheris nitrosus" is not to be one of the new examples. The digest contains a large number of useful suggestions for improvement of processes and tests, and a little humour occasionally creeps in, as, for example, when one critic states that "purissimus" articles seem always to contain impurities. When the revision committee have digested the three hundred pages of criticisms such as these, and forgotten most of them, they are certain to produce a pharmacopœia which will compare with any in regard to usefulness, and it is to be hoped that that will be the principal object which they will keep in view.

Dr. Skinner's Dr. Thomas Skinner, who, we believe, is a high dilutionist homœopath, describes, in the *Liquid Beef*. *Homœopathic World*, his method of preparing a liquid beef which he thinks is more suited for the sick-room than the preparations on sale. He knows that these are all certified by analysts to be chemically pure, and that each is better than the other, but neither of them is exactly the thing which he thinks is wanted. But after twenty years' experience of his own "liquid beef" in the sick-room, he does not hesitate to say that it will sustain its reputation as long as time lasts, and will always be found good, wholesome, and fresh. These are Dr. Skinner's directions for preparing it:—Procure a pint glazed earthenware jar, fitted with a closely-ground lid, which fixes with a slight turn of the lid. Such jars are made by Messrs. Bailey & Co., of the Fulham Pottery Works. Then take 1 lb. of rump-steak (gravy-beef will not do, as it jellifies, and is not so easily digested as rump-steak), remove the fat and membranous portions, cut the muscular fibre into pieces the size of a dice, and pack it into the *empty jar*. The jar may be filled to the top if there is enough meat. Before putting on the lid place a piece of calico or muslin over the bottom of the lid in order to insure its being as water, air, and steam tight as possible. Place the jar in an open pot of cold water, bring it slowly to the boil, and then let it boil for half an hour; the "liquid beef" is then ready. Undo the lid and pour out the contents. At first an oily, yellowish fluid passes, then a thick, grumous-looking fluid. These two constitute what I call my "liquid beef." Lastly, pour into the jar sufficient hot water just to cover the remains of the meat, stir it round with a spoon, and pour off the liquid portion into a cup. This is very good beef-tea, which may be taken by itself or added to the liquid beef. Taste what remains in the jar, and it will be found to be destitute of flavour, and to have no aroma of meat; boiled cork shavings is as near it as anything. The quantity of liquid beef obtainable from a pound of rump-steak is about half a teacupful. Dr. Skinner points out that this is pure beef, nothing added, and only the fat and membranous portion taken away. It will not keep, and he hopes no way of making it keep will be discovered. He found the process, he says, in an American cookery-book, and none of his lady patients or their cooks have been able to improve upon it.

TRADE-MARKS APPLIED FOR.

THE Trade Marks Journal publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, at any time within one month of the date of this journal, give notice in duplicate, at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications to be addressed to H. Reader Lack, Esq., Comptroller General, at the Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

From the "Trade Marks Journal," October 2, 1889.

A black crescent, with the letters "C. & Co."; for white lead, red lead, &c. By Cookson & Co., Newcastle-on-Tyne. 88,063.

Design of two clasped hands; for a sheep-dip. By Morris, Little & Son, Priory Place, Doncaster. 91,526.

"PASCALL'S GOLDEN MALTEX"; for chemical substances prepared for use in medicine and pharmacy. By James Pascall, 25 Valentine Place, and 100 and 101 Blackfriars Road, London. 87,192.

"LIVERINE," and other wording on black label; for mixture for the liver, for indigestion, &c. By David Anthony, Royal Arcade, 39 St. Mary Street, Cardiff. 87,999.

"BENSON'S CAPCINE PLASTER," and other wording on fancy label; for surgical and medical plasters. By Seabury & Johnson, 46 Jewin Street, London, and New York. 88,591.

"CARNAVENA"; for medicated wines. By Oppenheimer Bros. & Co., 1 and 3 Sun Street, Finsbury, London, E.C. 90,918.

"SEVEN SEALS"; for patent medicines for human use. By William Sturges, 139 Cannon Street, London, and 112 Southampton Row, London. 91,247.

"PRIORY BUDS"; for medicinal preparations for use of man. By Samuel Williams, 14 Belmont Street, Oldham. 91,262.

"ABLUFU"; for brushes, gloves, soles, &c., for surgical or curative purposes. By Paul Schlossmann, 3 Mitre Court, Temple, London, E.C., trading as the Ablufa Company, 10 Queen Victoria Street, London, E.C. 89,181.

Design (with figure of St. Paul), and the words "St. Paul's Dental Institute"; for artificial teeth and dental appliances. By Harry Eskill, St. Paul's Dental Institute, 57 St. Paul's Churchyard, London, E.C. 91,116.

Design, with the words "Ginger Ale" on label; for ginger ale, being an aerated and non-alcoholic beverage. By the Belfast Mineral Water Company (Limited), York Road, Belfast. 86,961.

"EGNARO"; for mineral and aerated waters, &c. By Lawson & Co., Surbiton, Surrey. 90,726.

"ARTEMES"; for mineral and aerated waters, &c. By Thomas Young & Co., 44 Lothian Street, Edinburgh. 91,355.

Design (a tablet and the words "The Dot Cleanser," &c. on label); for laundry and washing purposes. By Jacob Todd, Son & Company, 2 and 4 New York Street, Heywood, Manchester. 90,232.

"SANOGEN"; for soaps, perfumery, soap powder, detergents, &c. By T. H. Harris & Sons, Marsh Gate Lane, Stratford, London, E. 90,989.

"BORALLIS"; for harness-blackening and oils, saddle-soap, paste, &c. By Isaac Bentley & Co., Adelphi Works Salford, Manchester. 90,576.

From the "Trade Marks Journal," October 9, 1889.

Design of two crossed flags; for mineral dyes. By Farbwerke, vorm. Meister Lucius und Brüning, Hoechst-a/Main, Germany. 91,609.

"BACONINE"; for a chemical compound used for sanitary purposes. By Alfred Towers and Stephen Cheshire, trading as Towers & Cheshire, 239 Central Meat Market, London, E.C.

"PINE AND EUCALYPTUS BATH," and other wording, on picturesque design; for medicated and sanitary powders for use in baths. By William Henry Kerr, trading as W. H. Kerr & Co., 9 New Bond Street, Middlesex. 90,020.

Design of two crossed flags, with the words "American Teeth Institute," on label; for artificial teeth and dental appliances, included in Class 11. By Eskill & Sons, American Teeth Institute, 53 Ludgate Hill, London, E.C. 91,563.

"MAZAWATTEE"; for substances used as food or as ingredients in food, excepting tea. By Densham & Sons, 11 Philpot Lane, London, E.C. 91,541.

Design of crowned eagle on branch; for liquid and powdered rennet, annatto, and butter colouring. By William Hendrik Van Hasselt, Rotterdam. 91,566.

"CRICKLITE"; for candles and night-lights. By Samuel Clarke, Pyramid Works, Child's Hill, London, N.W. 91,117.

"LAVOLIO"; for preparation for laundry purposes. By Charles Henry Worsnop, Cheapside, Halifax. 91,622.

"THE GLEN BOUQUET," and other wording, on label; for a perfume. By Alfred Robert Walden, 81 Parliament Street, Ramsey, Isle of Man. 90,628.

"HERBALINE," with signature "Wm. Wood"; for a specially-prepared oil, being a hair restorer. By William Wood, 662 Ashton Old Road, Openshaw, Manchester. 90,590.

"IVY SOAP CAKE," and other wording, on cross-barred label; for perfumed soap. By Goodwin Brothers, Ordsall Lane, Manchester. 91,415.

From the "Trade Marks Journal," October 16, 1889.

"KEWROSCO"; for medicines, embrocations, mashies, &c., for horses, cattle, and dogs. By Isaac Bentley, trading as Bentley & Co., Adelphi Works, Pine Street, Salford, Manchester.

"SAPURIN"; for soap (medicated for human use). By Jonathan Pim Barrington, trading as John Barrington & Sons, 202 Great Britain Street, Dublin. 90,205.

"PEPSALUM"; for chemical substances prepared for use in medicine and pharmacy, and for foods. By G. & G. Stern, 62 Gray's Inn Road, London. 90,288, 90,289.

Design of two figures and table, with "Willmet's Neuralgeo" and other words on label; for a medicinal remedy for neuralgia, for internal and external application. By Robert Perry Willmets, 45 Fort Street, Barnstaple. 90,451.

"PEPSALIA"; for a chemical substance prepared for use in medicine and pharmacy, and for foods. By G. & G. Stern, 62 Gray's Inn Road, London. 90,722, 90,723.

Design, with portrait, of Lord Byron, and "The Byron Pill" and other words on circular label; for a patent medicine, viz., a pill for human use. By Samuel Hill, 16 Russell Square, Middlesex. 91,376.

"ENINIP," and other wording on square label; for a medical preparation for disease of lungs and chest. By Emily Beatrice Stables, 21 Grosvenor Street, Bath. 91,471.

"DIARRHINE"; for medicines for the cure of cholera and other diseases, and for goods included in Class 3. By Charles James Lilwall, Llydyadyway, Hay, R.S.O., Brecknockshire. 91,621.

"INFANTAGIO"; a medicine for human use. By George Frederick Handel Bartlett.

"VINCENTONIAN"; for chest-expanding braces, bandages, surgical appliances, &c. By Vincent Fava Wood, 29 Paternoster Square, London, E.C. 90,978.

Fanciful design of a globe with rings, and "The Malvern Mineral Waters Company" and other wording on circular label; for mineral and aerated waters, &c. By Henry McDowell and Frederick Howlett, trading as the Malvern Mineral Waters Company, Grove Lane, Camberwell, London, S.E. 90,025.

"FLORIANNA," and figure of female figure on jar; for a paste composition for laundry purposes. By Richard Barker, 41 Millwood, Todmorden, Yorkshire. 91,547.

Personalities.

MR. J. B. SEGALL, Wilna, Russia, asks us to mention that he has been awarded a gold medal at the Paris Exhibition for Russian drugs.

SEQUAH appears again to be dividing himself. We hear of him performing his miracles, parading the town with chariot and band, in Bolton and in Yarmouth on or about the same dates. Are he two, or is they one?

MR. C. L. STURROCK, who has for many years been the manager of the Scotch branch of the business of Messrs. Stevenson & Howell, has left per the s.s. *Austral* for a business trip through Australia and New Zealand, on behalf of the firm.

MR. RICHARD HARDING BREMIDGE, exhibitioner of the college, formerly of Merchant Taylors' School, has been elected to the vacant demyship in natural science at Magdalen College, Oxford, worth 80*l.* per annum.

MR. J. T. BAKER, of Halkett Place, St. Heliers, Jersey, has just opened a handsome three-windowed shop on the site of his old one. It has been newly fitted throughout by Messrs. Bowling & Govier, of London, and is a most convenient pharmacy, as well as an ornament to the popular Anglo-French town.

MR. W. B. PRATT, artist, of 173 Strand, asks us to mention that he was the designer of the chemist's handbill marked "I'll Try," which was so especially commended by the judges of the Ford-Shapland competition. He was disqualified through not being a chemist, but when he drew it he thought he would have been allowed to compete as the son of a chemist (Mr. J. B. Pratt, of Newbury).

THE "Grand Prize" and the "Gold Medal" men of the Paris Exhibition have been invited by President and Madame Carnot to a ball at the Elysée on Thursday, October 17. The Republican chamberlain who sent out the invitations seems to have scarcely mastered the intricacies of the English language. For instance, Messrs. G. B. Kent & Sons, the brushmakers, of London, are among the gold medallists. Two invitations duly reached their firm, one addressed to Monsieur G. B. Kent and the other Monsieur Sons. Monsieur and Madame Sons have gone to the festivity.

CANADIAN NOTES.

NEW BRUNSWICK PHARMACEUTICAL SOCIETY. — At a recent meeting the following officers were elected for the ensuing year:—President, Mr. C. P. Clarke; vice-president, R. W. McCarty; secretary, R. E. Coupe; treasurer, I. C. Cochran; and Messrs. M. V. Paddock, A. C. Smith, W. Mowat, S. McDiarmid, H. J. Dick, C. W. Parker, I. W. Racine, and C. H. Fairweather as the other members of Council.

NEW EXAMINATION SCHEDULE. — The Council have agreed upon new regulations for the qualifying examination. Under these it is required that candidates should take at least four hundred out of the possible six hundred marks. The subjects of the examination, as compared with the Minor of Great Britain, show it to be a little stiffer than the latter. Natural philosophy and organic chemistry are prominent parts of the chemistry portion. Natural orders come into the botany; but the pharmacy, materia medica, prescriptions, and dispensing are much similar to the Minor.

A YOUNG DOCTOR'S MISTAKE. — A young man in Parkdale, Toronto, consulted one of the best physicians in the West-end recently, and got a prescription from him, which contained among other things half a drachm of extract of belladonna. This he took to a drug store, where a young man who had just passed his M.D. examination was whiling away the time that intervened before he received his certificate from the Medical Council. The druggist was busy, and the offer of the advanced medico to make up the prescription was gladly accepted. Instead of 3*ss.* the young M.D. read ʒ*ss.* One dose of the medicine was sufficient for the patient, who only recovered after severe suffering. He blamed the prescribing physician, not the dispensing one, and now these two do not speak as they pass by.

MARRIAGES.

[Notices of Marriages and Deaths are inserted free if sent with proper authentication.]

BULL—BALKWILL. — On October 4, at the Friends' Meeting House, Plymouth, Alfred R. Bull, of Wodonga, Victoria Road, Exmouth, to Mary Ella, eldest daughter of F. P. Balkwill, Plymouth, chemist and druggist.

SIMPSON—SHARP. — At St. John's Episcopal Church, Forfar, N.B., on October 8, by the Rev. J. M. Aldridge, incumbent, Alexander Henderson Simpson, chemist, Forfar, to Johan, daughter of the late John Sharp, merchant, Forfar.

STEVEN—CARR. — On October 3, at the Parish Church, Milton-next-Gravesend, Alexander Steven, journalist, Berwick-on-Tweed, to Ada Jane, eldest daughter of Walter P. Carr, of the firm of William Graham Carr & Son, chemists, Berwick-on-Tweed.

DEATHS.

ALLEN. — On October 14, at Parkfield, Upper Clapton, Mr. Stafford Allen, formerly of the firm of Stafford Allen & Sons. Aged 83. Mr. Allen, who was well known to the past generation of London wholesale druggists, was born at Witham, Essex, in 1806. He was brought up as a miller, and lived at Hitchin till 1833, when he came to London, and established the business of drug grinder at 7 Cowper Street, City Road, in conjunction with the late Charles May. Mr. Allen may be credited with a considerable share in the reform of this branch of the drug trade. The practices of the drug grinders of the past have often been commented upon, but Mr. Allen's firm from the first set their faces against all connivance with fraud. The firm continued to be carried on, with one or two variations in its title, till 1867, when it took its present style of Stafford Allen & Sons. Mr. Allen retired from active business in 1871, but retained an interest in the firm till 1887, when he finally withdrew. He was a man of great benevolence, and especially so in connection with any movements taken up by the Society of Friends, of which he was a member. He took a keen and active part in the agitation for the liberation of slaves in America, being a member of the Anti-Slavery Society for many years; and at the close of the Franco-German war he was a member of the committee of the fund raised by the Society of Friends for the relief of the victims. He was also much interested in education, and was at one time treasurer of the Borough Road Schools. Mr. Allen was a keen Liberal in politics.

HORNER. — On September 30, Mr. James Thomas Horner, formerly a member of the wholesale drug firm of Horner & Sons, Mitre Square, died suddenly at his residence, Norbryght, Godstone, Surrey. Aged 73. Mr. J. T. Horner had not taken any active part in the business for sixteen years or more, and for many years, indeed, his connection with it had ceased altogether. He was the uncle of the three present partners in the house.

MCDONALD. — On October 7, 1889, Mr. John McDonald, who had been an assistant with Mr. Alexander Kinninmont, pharmaceutical chemist, Glasgow, for the past fifteen years. Mr. McDonald was knocked down by a van in the street in the spring of this year during a fog, and never quite recovered. His death was caused by rupture of the heart. He was much esteemed both by his employer and by all his acquaintances.

THE deaths are announced of Mr. R. E. Donovan, Donny-carney, the patentee of a number of scientific and surgical instruments; Mr. Henry Spedding (43), dispensary officer of the Belfast Committee; and Mr. Booker, drug, oil, and colour merchant, of Great Britain Street, Dublin. The latter died suddenly when about to give evidence in the Law Courts.

NEW COMPANY.

HINDES (LIMITED). — Capital 15,000*l.*, in 1*l.* shares. This is the conversion into a limited company of the business of Hinde Brothers, of City Road, London, and Birmingham, manufacturers of brushes of all kinds except those manufactured by the special machine processes of J. L. & W. L. B. Hinde, at Fazeley Street, Birmingham. Mr. W. L. B. Hinde is appointed the first director, for a period of five years.

Trade Report.

Notice to Retail Buyers:—It should be remembered that the quotations in this section are invariably the lowest net cash prices actually paid for large quantities in bulk. In many cases allowances have to be added before ordinary prices can be ascertained. Frequently goods must be picked and sorted to suit the demands of the retail trade, causing much labour and the accumulation of rejections, not all of which are suitable, even for manufacturing purposes.

It should also be recollected that for many articles the range of quality is very wide.

42 CANNON STREET, E.C., October 17.

IN nearly all departments of the drug and drysaltery trades business has been very good indeed this week, and we have to record an advance in the price of many important articles. The drug sales to-day were exceedingly heavy, and after some slight opposition it was decided by a large majority to hold over six of the eighteen catalogues until to-morrow. A considerable proportion of the goods offered was sold to-day, and the following are the principal alterations in the market since our last report. Cape aloes are again somewhat dearer, but, on the other hand, ordinary Curaçaos are being pressed for sale at lower figures. Common Zanzibars also easier. All kinds of balsams—copaiba, tolu, Canada, and Peruvian—are reported dearer from America, and cascara sagrada is also higher in price. At to-day's sales higher rates were obtained for fine cardamoms, ipecacuanha, annatto seed, and senna. Cascarrilla, colocynth, civet, honey, and chamomiles are very firmly held, but ergot of rye, Russian cantharides, gum kino, Japanese aconite, medium quality cardamoms, and also, perhaps, rhubarb are a shade easier, while musk is considerably lower. Opium is still tending upwards. Citronella oil, H.G.H. peppermint, Japanese peppermint, and menthol are dearer in price. Saffron is reported somewhat higher from Spain, raw camphor and Honduras sarsaparilla are very firm, and an active demand for gum tragacanth has resulted in an advance of about 10 per cent. Jamaica bees'-wax and strophanthus seed also firmer. In chemicals quinine is dull and somewhat weaker, mercurials are barely steady, iodine very uncertain, though still maintained in price. Sagar of lead and chlorate of potash have risen, and many important soda salts have further advanced. As regards drysalteries, shellac is easier, and so is block gambier. Cutch and good qualities of indigo are higher, and Chinese galls are also dearer. Cotton-seed oil is lower. Tea firm and advancing.

THE INDIAN MERCHANDISE MARKS ACT.—According to Indian journals, there seems to be something like a deadlock between importers of piece-goods into Calcutta and the Custom-house authorities, respecting the admission of goods not properly stamped with length in accordance with the Merchandise Marks Act, and all the Chambers of Commerce, with the exception only of Bombay, have backed the recommendations of the Bengal Chamber for a postponement of the operation of clause 2, section 10, of the Act for another three months. The reason that Bombay is an exception is that the committee of the Bombay Chamber, having taken the precaution to inform themselves thoroughly of the position of importers with respect to stamping, warned shippers of goods from Europe in ample time as to the requirements of the law, with the result that little or no difficulty has arisen in this respect in Bombay. The first case under the Indian Merchandise Marks Act came before the joint magistrate at Cawnpore on August 24, when several dealers were convicted of having sold pieces of native-dyed grey cottons, dyed with a German-made pigment, imported into Bombay for the purpose, as European manufactured Turkey-red cloth, and labelled as such. Each of the accused was sentenced to a fine of Rs. 200. All the false labels were ordered to be removed, but no goods were confiscated.

THE CINCHONA SYNDICATE.—The following circular has been issued on behalf of the promoters of the cinchona syndicate:—

“Colombo, September 20.

“Dear Sir,—It is contemplated to form the ‘Ceylon Cin-

chona Syndicate’ for the purpose of receiving, pressing, and storing cinchona in Colombo until shipment, and the undersigned will be glad to know whether, in the event of the syndicate being fully constituted, you would be willing to give it your support by sending your cinchona to it.

“The terms upon which business would be done are as follows:—

“Advances would be made to growers of 50 per cent. of Colombo values on ascertained analyses. It would be stored free of rent for four months, after which a moderate rent would be charged till time of shipment.

“Interest would be charged at 8 per cent. per annum. Pressing charges, including shipping, would be 2c. per lb.

“Shipments would be made in the same rotation as that in which the cinchona was received, but only at such times as the syndicate might deem to be desirable.

“Owners of cinchona might have shipments, when made, consigned to their order, in which case advances would have to be repaid at the time of shipment, but if the sale of the cinchona in London were left in the hands of the syndicate, the advances need not be repaid until proceeds are accounted for. Arrangements could also be made for the holding of cinchona longer than the time at which, in rotation, its turn would come round for shipment.

“Your reply at your earliest convenience will much oblige.

Yours faithfully,

“FRED. WM. BOIS.

“W. W. MITCHELL.

“J. J. GRINLINTON.”

It will be seen that [the present proposals of the quinine syndicate somewhat differ from those originally propounded. We may point out that the present rate for pressing bark and shipping in Colombo is, we think, 1½c. per lb.

ACIDS.—*Citric* quiet at 1s. 3¼d. per lb. *Benzoic* is offering liberally at lower rates, say 4d. per oz. *ex resina*, but the demand is slow. There is not much hope for improvement in this article while the supply of gum benzoin for manufacturing purposes remains as plentiful as it is now. *Gallie* is quoted at 2s. 6d. per lb., and *Tannic* at 2s. for light crystals, and 1s. to 1s. 3d. per lb. for powder. *Tartaric* is reported to have been in slightly better request this week, but prices are not moving; 1s. 2d. to 1s. 2¾d. will buy, according to brand. *Oxalic* acid rather firmer at 4½d. per lb. *Salicylic* acid in powder is worth from 5s. 1d. to 5s. 5d., and in crystals from 5s. 7d. to 5s. 11d. per lb., according to quantity and packing.

ACONITE ROOT.—There are several parcels of the Japanese root offering now, and lower prices would be accepted, though at the auctions everything was bought in. For two parcels 24s. and 25s. respectively was refused, but for a third lot the latter figure would be accepted.

ALOES.—This week's Cape steamer again has failed to bring any aloes from South Africa. Privately 27s. 6d. is said to have been paid for good bright hard quality. At the auctions 29 packages, including only a few of good quality, were mostly bought in. About 8 cases sold at prices equivalent to 1s. per cwt. advance; good hard at 28s., common drossy at 19s. per cwt. Of *Curaçaos* 522 boxes were offered to-day, and sold rather cheaply; brown to fair red liver at 38s. to 45s.; fair ordinary to medium, 25s. to 26s.; fair to fine bright Capey, 21s. to 31s.; ordinary over-heated and frothy at 10s. to 14s. per cwt. Of *East Indian* aloes 44 cases were all bought in at 95s. to 5l. 10s. per cwt. for dark to fair brown softish. There is a demand for good bright *Zanzibar* aloes in skins, of which our stock appears to be rather low. Sour soft *Zanzibars* in tins were again much cheaper to-day, and sold at 33s. to 45s. per cwt., according to colour and degree of moisture.

AMBERGRIS.—Fine grey ambergris is priced at 150s. per oz. A small tin of good greyish colour, but weak flavour, sold at auction at 102s. per oz.; while for another lot of dull grey-coloured small pieces 70s. per oz. is said to be the limit. Common black stuff sold at 10s. to 19s. 6d. per oz. to-day.

ANISE.—Good *Spanish* seed is offering at 40s. per cwt. *Russian*, of new crop, according to quality, at 18s. to 20s. *Star-anise* is cabled to-day from Hong Kong as very scarce; here there is very little offering. Nine cases of very doubt-

ful character were bought in to-day at 70s. per cwt. nominally.

ANNATTO.—*Seeds* are fetching somewhat better prices, though they still remain very cheap. Good bright West Indian fetched $3\frac{1}{4}d.$ per lb. to-day; dark coloured ditto, $2\frac{1}{4}d.$

BALSAMS.—*Canada* balsam is reported dearer from America, with a good demand for export; present quotations $1s. 4d.$ to $1s. 5\frac{1}{2}d.$ per lb. According to New York advices, the bulk of the *Copaiba* balsam offering there recently has been taken out of the market, and only two small lots are left in importers' hands, holders showing great firmness, nor is anything known of arrivals on the way. For to-day's auctions 3 casks good bright thick Maranham were catalogued, but reported sold privately. For 10 cases thin Pará, $2s.$ per lb. was suggested. *Tolu*: privately $1s. 4d.$ per lb. is given as the price. At auction a lot was priced at $1s. 5d.$ per lb. *Peruvian* balsam is also said to be more active in New York, though prices are still ruling very low, at the parity of $4s.$ per lb. in London; but at auction to-day $3s. 10d.$ was still suggested, though there were no buyers. 100 drums *Wood oil* are quoted at $4\frac{3}{4}d.$ per lb.

BLEACHING POWDER remains very firm at $7l. 15s.$ ex warehouse, London, and $6l. 17s. 6d.$ to $7l. 2s. 6d.$ on the Tyne. The increased demand for this article has caused the association of makers to abrogate the agreement relating to the limitation of the supply from the beginning of this month instead of from January 1 next as first intended. All factories in the North are working at high pressure, and still their output scarcely keeps pace with the demand.

BUCHU.—The new crop is still coming in in small lots, and prices remain very low; $2\frac{1}{4}d.$ per lb. was accepted to-day for good-flavoured bright green leaves, and $1\frac{1}{2}d.$ for discoloured and stalky ditto.

CALUMBA.—Fifty-one bags sorts, slightly wormy, fair mixed colour, were sold at $12s. 6d.$ per cwt. to-day, and 19 bags sound root of better colour at $15s. 6d.$ per cwt. A parcel of good yellowish root was offered cheaply at $18s.$ per cwt.

CAMPHOR (CRUDE).—We have not heard of much business on the spot, but the market remains exceedingly firm, $110s.$ per cwt. being the current spot quotation for Japan camphor, while 200 piculs Japan near at hand are reported sold at $106s.$ c.i.f., delivered weights. In China there is none to be had at present.

CANTHARIDES.—Two casks *Russian* flies of good colour, rather dusty, sold at $3s. 6d.$ to-day, which is rather below the price recently asked. Some good *China* flies will be offered to-morrow.

CARDAMOMS.—Part of the supply for to-day's auctions stands over until to-morrow; of the 225 cases reached to-day 112 sold quite irregularly, a few fine lots about $1d.$ dearer, and some of medium quality from $2d.$ to $3d.$ below valuation. *Myorc*, good pale small to bold round, $2s. 11d.$; rather lean but bold ditto at $2s. 8d.$, rising to $2s. 10d.$, and medium size at $1s. 8d.$; fair medium pale round, $2s. 1d.$ to $2s. 2d.$; yellow, medium size, mixed shape, $1s. 7d.$ to $1s. 8d.$; small, $1s. 2d.$; fair brownish medium, $1s. 5d.$; unclipped brown, part split, at $10d.$ down to $6d.$ per lb.; *Malabar*, small round, fair colour, $1s. 5d.$; very dark, $1s.$; *Aleppy* character, medium size, $1s. 1d.$ to $1s. 2d.$ per lb.

CASCARA SAGRADA.—Our market has been rather stiffer this week, and $7\frac{3}{4}d.$ per lb. is said to have been refused for a rather considerable quantity. Forward is also quoted dearer, at $80s.$ per cwt. One of the largest New York operators observes that this article is attracting particular attention from buyers whose supplies are short, considerable quantities both of thick and thin bark having been bought up at rather high rates, while the article is steadily tending higher in price, the export demand being also particularly active. It is said that in California nothing can be had under $7\frac{1}{2}d.$ per lb., and that one firm alone on the Pacific coast control from 2,000 to 3,000 cwts., which they will not let go at less than the equivalent of $1s. 3d.$ per lb. This quantity is, therefore, practically out of the market at present, though it may possibly be unloaded at a later period if the market should not rise up to the expectations of the owners.

CASCARILLA.—Sixty-two packages all bought in, and held at full prices; thin brown at $24s.$, fair small silvery, $24s. 6d.$ refused.

CASHEW NUTS.—A sample package of 48 lbs. sold at $2s.$ for the lot, subject to paying charges.

CASSIA FISTULA.—One box good sound West Indian pods went cheaply, at the rate of $11s.$ per cwt.

CHAMOMILES rather scarcer, at $40s.$ per cwt. for good Belgian.

CINCHONA.—There was no competition whatever for flat *Calisaya* bark to day, and all parcels offered were bought in at nominal rates, the bulk being of inferior quality. *Guayaquil* bark held for very high prices, and only a few lots sold at $4\frac{1}{2}d.$ to $1s. 1d.$ for ordinary to good long brown quill. For fine silvery *Loxa* bark $1s. 10d.$ per lb. is asked; and $7\frac{1}{2}d.$ to $8d.$ for bold bright *Maracaibo*. Good bright *Lima* bought in at $6d.$ per lb. nominally. Our imports this week have been 809 packages from all sources. Next Tuesday's auctions promise to be very heavy, 3,984 packages having been declared for sale already, composed as follows:—Ceylon, 2,301; Indian, 521; Java, 35; South American (mostly Cuprea), 1,127. The receipts of cinchona bark by rail at Colombo during the last three seasons (October 1 to September 30) have been: 1886-7, 5,677 tons; 1887-8, 4,325 tons; 1888-9, about 3,100 tons.

CIVET.—Fifteen horns were offered for sale to-day. One sold at $8s.$ per oz., but less would not be taken. Another holder also refused a bid of $7s. 6d.$ per oz.

COCA LEAVES.—The price for good green leaves is $1s. 2d.$ per lb. At auction two bales good green *Truxillo*, rather broken, were bought in at $1s. 4d.$ per lb.

COLOCYNTH.—Good Turkey colocynth remains rather scarce, and is quoted at $1s. 4d.$ to $1s. 6d.$ per lb. for rather dull to fair, but seedy, apple. Only a few packages sold at auction; ordinary damaged at $1s.$; dark broken and seedy, $9\frac{1}{2}d.$ per lb.

CONDURANGO.—For 40 bales of woody bark the price of $1s.$ per lb. is asked, which is very much above buyers' ideas.

COPPER (SULPHATE) remains very firmly held at $22l. 10s.$ on the spot, while for January-June $21l.$ has been paid. For immediate delivery there is very little available.

CREAM OF TARTAR.—The market remains firm but quiet at $91s.$ per cwt. for white French crystals.

CUBEBS.—Twenty-two packages at auction were all bought in at $22l. 10s.$ to $23l. 10s.$ per cwt. for genuine berries mixed with spurious fruit and stalk.

CUMIN SEED.—Malta remains dull of sale. Ten bags of fairly good flavoured seed sold at $21s. 6d.$ per cwt. to-day.

DRAGONSBLOOD.—Only seven cases were offered to-day, three of which sold very cheaply; good colour, partly out of reed, at $6l.$; for rather bolder but more bricky finger in reed $5l. 10s.$ could not be obtained.

DYEWOODS AND EXTRACTS.—*Logwood* remains firm, with a steady demand. *Fustic* moving off steadily, but the available supply does not appear a large one. For extracts the following prices are quoted at present, all on "c.i.f." terms:—*Logwood*, $42s.$ to $45s. 3d.$ per cwt., according to brand; *Quercitron*, $32s. 6d.$ per cwt.

ELATERIUM.—Of 961 oz. *Malta*, 159 oz. of usual fair quality brought $2s. 6d.$ per oz.

ERGOT OF RYE.—It is said that there has been a somewhat better demand privately, but this was certainly not apparent at the auctions, when, of several parcels offered, only 6 bags thin *Spanish* sold cheaply at $1s. 4d.$ per lb. Bold *Spanish* is quoted at $1s. 6d.$ per lb.; *Russian* at $1s. 3d.$ to $1s. 3\frac{1}{2}d.$ per lb.

GALLS.—In *China* galls a good deal of speculative business is reported. It is said that one of the principal firms in the trade has sold over 2,000 cases at the rate of $59s.$ "c.i.f." terms lately without being covered. Meanwhile higher prices are now paid here, and another $1s.$ advance has been paid for forward delivery, November-December—viz., $61s.$ per cwt. "c.i.f." terms, both to London and Continental ports, for rather considerable quantities, sellers subsequently refusing to proceed farther. A cablegram from Shanghai, dated 14th

Inst., announces that the stock there is exhausted, and that about one-third of the crop has been spoiled. Turkey galls are firmly held, both here and in Smyrna. Our quotations run from 54s. to 55s. for good Bassorah blues, 47s. 6d. to 50s. for greens, and to 45s. per cwt. for white galls. At auction about 400 bags were offered at these figures.

GAMBIER.—A pretty good trade is reported, but the values are a shade in buyers' favour—viz., 28s. 3d. for August-September, 27s. 9d. for September-October, 27s. 3d. for October-November, and 27s. for November-December shipment.

GAMBOGE.—Only a single case was offered to-day, and sold at 10l. 12s. 6d. for fairly good pipe of good fracture.

GLYCERINE.—No change in the position this week, and quotations for double-distilled, s.g. 1.260, remain at 63l. to 67l. per ton, though some second-hand stuff might perhaps be obtainable a shade below this.

GUARANA said to be tending higher, and from 4s. to 4s. 3d. per lb. is now asked, an advance of from 3d. to 6d. per lb.

GUM AMMONIACUM remains very scarce indeed, and none was sold at to-day's auctions. The nominal prices are:—Good to fine free bright drop, 40s. to 45s. 6d.; good bright siftings 20s. to 22s. per cwt.

GUM ARABIC.—The imports of *Australian* red gum still continue on a rather extensive scale, and from *Mogadore* also we are receiving considerable quantities. In *East Indian* gums there has recently been rather more inquiry for ordinary Ghattis and for red Amrads, also for olibanum-scented gums from Bombay and Kurrachee. Pale Cawnpore Amrad is dull and quiet at about 60s. per cwt. In Liverpool there has been a rather better demand, and somewhat higher rates have been conceded. Only a few lots were offered at to-day's auctions, and mostly bought in. For a parcel of good pale glassy *Aden* sorts, unscented, 65s. was bid, but the lot proved to have been sold privately already. Seven packages of small siftings, Talca character, were bought in, and three cases resembling *Gehzrah* sifting sold without reserve at 70s. per cwt. Three cases of a nondescript kind of supposed Turkey gum realised from 5l. to 5l. 10s. per cwt.

GUM BENJAMIN.—The assortment catalogued for to-day's auctions was a very poor one, and all the *Sumatra* gum had to be postponed until to-morrow. 201 cases of *Palem-bang* passed under the hammer, and were all bought in, good almondy seconds at 57s. 6d., dull mixed with almonds at 40s., common earthy at 27s., while for some very low lots offers of 14s. and 15s. were refused.

GUM ELEMI still remains dear and scarce. For good pale Manila, 40s. per cwt. is asked. A few cases will be offered to-morrow.

GUM KINO sold cheaper to-day, at 23s. 6d. for eight cases of fairly bright colour.

GUM MASTIC.—Good yellow drop bought in at 2s. 5d. to 2s. 6d. per lb. Eight cases common grey Persian, from Bagdad (so-called mastic), bought in at 6d. per lb.

GUM MYRRH.—Without demand, and held at 6l. 10s. for good selected, and 80s. to 85s. for *Aden* sorts.

GUM TRAGACANTH.—A very active business is reported this week in *Syrian* thirds at 6l. 15s. to 7l., and fair seconds at 9l. 10s. to 10l. 10s. Fine pale firsts held at 12l. per cwt. Smyrna reports a steady market at unaltered rates; the stock there at the end of September was about 190 cases. Our quotations are about 10s. dearer all round.

HELLEBORE ROOT.—Thirteen bales good root, slightly mouldy, were partly sold at 20s. per cwt. to-day.

HONEY remains in good demand, and brings full prices for good descriptions. Twenty-six cases fine hard pale and yellow mixed *New Zealand*, in tins, sold at 48s. per cwt. to-day; for a darker mixed parcel 43s. was refused. For 12 kegs *Chilian*, partly sugary and of mixed colour, 38s. is asked. It is said that there is some scarcity of *Californian* honey on the Pacific side of the States this season, the finer grades especially being the reverse of plentiful.

INDIGO.—The October auctions of *East Indian* indigo lasted from Monday until Thursday this week. A good deal

of interest was manifested, and in the result *Kurpahs* sold at very strong to somewhat dearer prices for good colour qualities, but from 2d. to 3d. per lb. lower for common pale grades. *Madras* was 2d. to 3d. dearer for dry leaf at the beginning of the sales, but subsequently it eased off somewhat. *Bengals* firm with good competition for all kinds, particularly the medium and lower grades. *Oudes* generally rather lower at the commencement of the sale, but towards the close a better feeling set in. Out of a total of 7,290 chests 4,650 were sold; this quantity has not been sold at any single auction since 1884.

IODINE.—The official price for crude iodine still remains 9d. per oz., and iodides are also unaltered in price. At to-day's auctions, however, 12 kegs of the same brand which recently created a disturbance in the market were offered, and there was much speculation as to the result of this move. An offer of 5d. was made for the first lot, and then one of 7d. (said to have been on behalf of the "syndicate"), but the broker bought in the whole parcel. As a matter of fact, it is said to have been privately sold last night, but the price is not known with certainty; some say it was 8d., others 8½d. per oz. Meanwhile, another arrival of over 40 kegs, supposed to belong to the same owner, has arrived this week, and altogether the position of the article is quite uncertain.

IPECACUANHA.—29 packages were offered to-day, the quality being rather below the average. Holders showed themselves exceedingly firm. The first broker bought in his 17 bales at 7s. per lb. (he is said to be limited at 6s. 11d.). His colleague sold his 12 bales at an advance of about 3d. per lb.; very thin to good usual quality sound, at 6s. 3d. to 6s. 8d.; damages at 6s. 3d. to 6s. 7d. per lb.

KOLA NUTS.—One case of well-dried seed brought 10d. per lb., and a barrel of fresh Kolas 4d. per lb. Seven barrels mouldy West Indian bought in. Three cases "fresh sprouting Kola nuts," said to contain from 2,000 to 3,000 per case (!), were offered as a novelty, but no one would bid for this lot.

LEAD (ACETATE) has again advanced, and is now quoted at 23s. 6d. per cwt. for best white foreign spot, or 22s. 6d. f.o.b. Hamburg. It is said that one of the largest makers in Germany has bought up the factory of a competitor who had hitherto been rather obnoxious in underselling, and also that the convention formerly existing between the makers has to some degree been renewed.

MANNA.—The present prices for new crop manna are: finest flake, 2s. 1½d. per lb.; broken flake, 1s.; Gerace sorts, 9d. per lb., f.o.b. Palermo.

MATÉ.—Twenty cases and 48 barrels of this article were catalogued by mistake as coca leaves to-day. For one barrel of coarsely broken leaves, which had a pronounced flavour of coca, 7½d. per lb., the rest, partly done up in small paper packages, was all bought in without mention of price.

MERCURIALS.—Although the prices are still unchanged officially, and the basis of 3s. 7d. per lb. for *Calomel* is maintained, yet for large quantities the makers would accept lower prices, say 3s. 5d. for half-ton lots.

MUSK.—A rather large quantity, not comprising many tins of fine musk, was offered to day, and partly knocked down at a considerable reduction in price, fine pile I. about 2s. 6d., and more ordinary ditto from 5s. to 7s. per oz. cheaper. First pile *Tonquin* pods, 3 caddies well trimmed, blue skin and underskin, small to medium, a few bold, 85s.; 2 caddies small to medium pods, dry and well trimmed, old-fashioned shape, 75s. to 76s.; five ditto bolder but badly trimmed and damp, 75s.; 2 caddies thin blue skin, but damp, 72s.; one caddy old-fashioned shape, rather skinny and weak flavour, 72s. per oz. Third pile fine thin blue skin pods, but adulterated, 67s.; very wet ditto, 44s. to 48s.; bold damp skinny and untrimmed, 37s. 6d.; low, very skinny, 19s. 6d. per oz. *Yunan* pods, one caddy small to medium, good quality, 48s.; five bottles good sweet *Nepaul* grain, 64s. per oz.

NUX VOMICA.—A parcel of 350 pockets rather small pale seed, partly very damaged and broken, and not very silky, sold at 8s. to 8s. 6d. for sound, 7s. to 8s. for damages, and 4s. per cwt. for a very common lot.

OIL (CASTOR) remains very scarce and dear. *French* oil, for pharmaceutical purposes, 41s.; first pressings, 36s. to

38s. per cwt. Calcutta firsts and seconds are now both quoted at the same price, viz. 4½d. per lb., with small sales of seconds at that figure, while to arrive business has been done at 3½d. to 3½d. for September-October shipment *viâ* canal. At to-day's auctions 110 cases good pale Calcutta were shown, and quoted at 4½d. per lb. Mail reports from Calcutta state that business has been small, owing to the advance asked by the crushers, who have had to pay more money for the seed. The stock and arrivals of seed are very limited in extent.

OILS (ESSENTIAL).—*Star-anise* firmly held at 6s. 1d. per lb. spot, though for forward delivery business is said to have been done at 5s. 8½d. c.i.f. terms a few days ago. *Cajuput* oil 4s. per bottle. *Citronella* firm, 12 cases (tins) selling to-day at ¾d. to 1½d. per oz. at auction. Fisher's *Patchouly* oil, 1s. 4d. per oz. *Menthol* has advanced, and Cocking's brand is now quoted at 7s. 6d. per lb. For a parcel of good crystals of a native brand 5s. 3d. per lb. was refused at the auctions. Of *Peppermint* oil H.G.H. 200 cases are said to have been done in New York at the price of equal to 11s. 9d. London terms, but 11s. 6d. per lb. might probably still buy here. Japanese oil in demand, and dearer at 4s. 3d. for fine quality. Very yellow oil sold at auction to-day at 3s. 4d. per lb. *Sassafras* oil is scarce in the States, and prices have risen to 2s. 2d. per lb. in consequence of the failure of the crop.

OIL (OLIVE).—There is not very much offering on the spot, but at the same time the demand is not very lively. *Spanish* oils are nominal at 36l., with small imports; *Mogadore*, 34l. 10s. to 35l.; *Sicilian*, 36l. In Messina there has been a decline on the market, and prices are now nominal without buyers.

OILS (VARIOUS).—*Cocunut*: Cochin firm at 27s. to 27s. 6d. for pipes on the spot, and Ceylon 24s. pipes, and 24s. 9d. hogsheds; Mauritius slow at 24s. 9d. nominally. *Cottonseed* has become quieter; crude oil on the spot, 20s. 3d. to 20s. 6d.; Liverpool refined oil dull at 23s. 9d. to 24s. 9d., according to packing. *Linseed* oil steady and hardening, spot stuff being now quoted at 21s. to 21s. 3d. per cwt. In Liverpool there is a fair trade at 22s. 9d. to 23s. for refined in export casks. *Palm oil*: Fine Lagos slow of sale and obtainable at 26s. 3d. to 26s. 6d. In Liverpool the inquiry is better, and holders are very firm. *Petroleum* flat for American, spot, 5½d. to 5½d.; November-December, 5½d. to 5½d.; January-April, 5½d. to 5½d. Russian spot, 5½d.; November-December, 5½d. *Rapeseed*: English refined oils are still firmly held at 30s. 6d.; Stettin ditto, 34s.; brown oil quiet at 28s. 9d., spot and month. *Turpentine*: With heavy arrivals the market has ruled lower, but closes better at 35s. 6d. per cwt. on the spot, 35s. 9d. for November-December, and 36s. 3d. for January-April.

OPIMUM.—There has been a better demand for *Persian* opium this week, and prices have risen about 6d. per lb., holders now asking 14s. 6d. for bricks, and 13s. 6d. for balls. There is not much offering of this description. In soft shipping there has been some business up to 14s. 6d. per lb. Manufacturing opium, 10s. 6d. per lb. The market is firm, but business rather restricted. We hear that the order for 450 cases, the annual purchase for the Dutch Colonial Department, has been placed with Constantinople merchants, who in their turn have commissioned three large Smyrna firms to purchase for them. Examined Karahissar has been most in request, and has gradually risen from 11s. 3d. to 12s. 8d. per lb. About 80 cases of this variety have been bought, and this, together with what was purchased in Constantinople, will constitute the first delivery of 200 cases in November next. Other varieties have been comparatively neglected, with some inquiry for Bogaditz and Yerli opium. Until the purchases for the Dutch Government are completed, the Smyrna market is not likely to calm down again.

PODOPHYLLIN.—Good yellow resin is quoted at 8s. to 8s. 3d. per lb., "c.i.f." terms, according to quality.

POTASH SALTS.—*Potashes* remain dull at 21s. to 21s. 3d. per cwt. nominally, while *Pearlshes* are quoted at 31s. per cwt., nearest price. *Bichromate* still sells at 4d. per lb., and may be called firm at that figure. *Chlorate* is in a very strong position, and available supplies are of the smallest; the price has again advanced since last week, and 4½d. per lb.

is now generally quoted, though something might still be obtainable at 4½d. per lb. There has been a good deal of inquiry for delivery over 1890. *Prussiate* very firm, at 7d. for foreign up to 7½d. per lb. for English yellow. Red, 1s. 7d. per lb. English refined saltpetre, 21s. in large and 22s. in small packages.

QUICKSILVER.—Importers still quote 9l. 5s., second-hands sold at 8l. 18s. 6d. to 9l. per bottle.

QUILLAYA BARK.—Business is reported at the rate of 15l. per ton.

QUININE.—The feeling has been decidedly less confident this week, and only some 70,000 oz. are reported to have changed hands, at about ½d. under the highest point last week, viz. 1s. 2½d. per oz. for spot (at which there are further sellers), and 1s. 2½d. to 1s. 3d. for November-December delivery. January-February is reported to have been done at 1s. 3½d., and subsequently at 1s. 3½d. second-hand, but German makers ask 1s. 3d. to 1s. 4d., for delivery early next year, without meeting with response. A firm of German quinine-makers, referring to the last sales of cinchona in London, point out that (a) the unit value paid at the sales on October 9 was 26½ per cent. above the unit value on January 29; (b) German sulphate of quinine was quoted at the same price in January (1s. 3d.) as in October, 1889; (c) the price of bark is therefore 26 per cent. above the value of sulphate of quinine (?); (d) taking the unit value of the sales on January 29 at 100, the fluctuations during the year have been as follows:—

29 Jan.	= 100	7 May	= 75·7	30 July	= 78·5
12 Feb.	= 100·5	21 "	= 84·2	13 Aug.	= 92·3
26 "	= 90·3	4 June	= 76·3	27 "	= 102·1
12 March	= 87·3	18 "	= 84·2	10 Sept.	= 108·8
23 "	= 83·6	4 July	= 81·0	24 "	= 117·3
9 April	= 75·7	16 "	= 77·6	8 Oct.	= 125·3

RHUBARB.—A rather large assortment was shown for to-day's sales, but it included very few lots of fair quality. At to-day's auctions 195 cases were offered, of which 84 were sold at easy rates, though scarcely quotably lower. *Shensi*, orange coat, mixed sizes, round, good ¾ pinky fracture, 2s. 4d.; fair yellow-coated round root for trimming, partly loose and spongy, 1s. 11d. to 2s.; good round orange-coated root, fair fracture, 1s. 10d.; flat and duller fracture, 1s. 4d.; spongy and woody, small to medium, ¾ pinky fracture, 11d.; dark-coated untrimmed root, 6½d.; several lots of common, very wormy root, 4½d. to 5½d. per lb. *High-dried*, small to bold, fair coat, good bright fracture, 11½d. to 1s. 1d.; small ditto, 9½d. to 8½d.; bold, but colourless and wormy, 5½d. to 7d. per lb. This week 71 cases have been landed.

SARSAPARILLA.—At to-day's auctions a quantity of grey *Jamaica* root sold at 1s. 4d. for damaged. For sound root 1s. 6d. is wanted. Damaged Guayaquil sold at 10½d. to 11½d. per lb. Higher prices come from New York for *Honduras* root, viz. 1s. 2d. for the commonest qualities, and from 1s. 3½d. to 1s. 8d. per lb. for the better brands, "c.i.f." terms. The total first-hand stock in this important market is said to be only 144 bales.

SENNA.—For to day's auctions nearly 1,000 bales *Tinnevely* were advertised, but only about 650 of these were reached to-day. One broker bought in about 150 bales at prices very much above those now ruling, but others sold freely, and over 500 bales found buyers, with very good competition, at fancy prices for the finest lots, about ¾d. to ¾d. dearer for medium and good qualities, and very full prices for ordinary leaves. The average quality was much better than that of the preceding sales. Very fine bold gree leaves sold at 1s. 0½d. to 1s. 3d. per lb.; good bright bold at 7½d. to 11½d.; medium green, 6d. to 7d.; mixed with small and yellow to very fair, 3½d. to 5½d. (the great majority of the lots sold being of this description); and ordinary thin specky, common and damaged from 3½d. down to 1½d. per lb. *Alexandria* senna, 1s. 7d. for whole leaf, 9d. to 11d. for good broken, and 5½d. to 7d. for siftings.

SHELLAC.—Mainly under the influence of the announcement that the auctions on Tuesday would be exceptionally heavy, the market gave way considerably towards the close of last week, and between Friday and Tuesday second orange fell from 3s. to 3s. 6d. per cwt., garnet lac being also lower.

Originally over 2,000 cases had been advertised for sale, but the catalogues actually included only the following:—

	Cases	Cases
Orange lac	1,012 of which	470 were sold
Garnet „	242 „	100 „
Button „	447 „	100 „
	1,731	670

The demand was rather slow, and, as compared with the previous auctions, orange and garnet lacs were fully 1s. lower, but button lac sold fairly steady. The following prices were realised:—First orange, BSLs, worked, rather dull colour, 92s. to 93s.; VSO, good reddish, 87s. to 90s.; fair red seconds, 74s. to 75s.; ordinary livery, 70s. to 72s.; *Garnet AC*, good free, 63s. to 64s.; *Button*, fair to good bright first, 94s. to 98s.; fine first had sold privately before at 100s. Of common Bombay resin, resembling button lac, 30 cases sold, at 20s. to 27s. per cwt. Since the auctions business in futures has been very dull at lower rates. The exports of shellac from Calcutta to all parts during the first half of October have been 4,050 cwt., of which 3,100 to U.K., as against 700 last year. The Calcutta market on September 24 was very quiet, owing to the near approach of native holidays, but it was expected that the market would subsequently resume its more animated appearance.

SODA SALTS.—The general feeling in these articles remains very firm, and prices are generally of an advancing tendency, in sympathy with the increase in the price of coal and the action of the salt syndicate. *Soda ash* firm, at 1d. per degree on the Tyne and 1½d. here. For next year higher prices are asked. *Bicarbonate* firm, at 5l. 5s. to 5l. 10s., London. *Bichromate*, 3d. per lb. *Caustic* inactive, owing to scarcity, but very firmly held at 7l. 5s. to 7l. 10s. for 60-per-cent. to 70-per-cent. white. *Crystals* dear, at 56s. to 57s. ex ship, London; Tyne, 47s. 6d. spot. *Nitrate* quiet, owing to large arrivals of good grade; on the spot, 8s. 6d. to 9s. 1½d. per cwt. is the price.

STROPHANTHUS SEED.—Thirty lbs. of green seed, rather brownish tint, were bought in at 10s. per lb. Privately from 8s. 6d. to 9s. per lb. has recently been paid for similar seed.

TEA.—The *China* market is dearer for all lower grades. Common Shantam and common old Saryune and Kaisow may be bought at 4½d. to 4¾d., but anything above those grades fetches 5d. to 5½d., and is well competed for. All Congous under 8d. show some advance, but far better value than Indians or Ceylons at the same prices. Over 8d. per lb. easier prices are quoted for Panyong, and really fine Panyongs and Chingwos from 11d. to 1s. show very good value. Good Soomoos under 1s. are not very plentiful, the only teas worth buying being so-called “crack-chop” teas, costing the importers high prices in China. Oonfaas from 8d. to 10d. are very useful teas, though with very few exceptions there is more or less tar in the liquor. *Assams* remain very dear, common leaf tea fetching 7d. per lb., and very little to be had at that price, while common Pekoes fetch 9d. to 9½d. Telegrams from India, moreover, just received, report shipments from India as heavy, and the recent deficiency, as compared with last year, has been more than made up. *Ceylons* are as dear as ever, common Souchong fetching 10d., and Pekoe 1s. to 1s. 0½d.

TONQUIN BEANS are in good demand at 6s. to 6s. 3d. per lb. for fine frosted *Angostura*. According to the latest advices from South America, the new crop of *Pará* beans was just arriving at the market centres, but no prices had been fixed for it yet.

VERATRINE.—Sabadilla seeds, from which this alkaloid is obtained, are held at high prices in Hamburg, which is the market for this article, and where it has long been cornered by speculators, but the makers of the *B. & S.* brand state that in spite of this fact they have been enabled, by improvements in their mode of manufacture, to reduce their quotations to 30s. and 32s. per lb., according to quality.

WAX (BEES).—*Jamaica* dearer, fine even orange selling at 6l. 7s. 6d. to 6l. 10s.; good bright, 6l. to 6l. 5s. per cwt. Good *Mogadore* bought in at 90s. One case white bleached *East Indian* sold at 7l. 15s., and good *New Zealand*, mixed colours, at 6l. For good yellow *Madagascar* 86s. was refused to-day.

WILD LIQUORICE SEED.—Two 1-cwt. bales of these pretty seeds from the West Indies were offered to-day, and bought in at 12s. per cwt. We believe that a decoction of these seeds was at one time used in medicine as a remedy for ophthalmia, but they have quite fallen into disuse as such. It may be remembered that at the Colinderies necklaces and other ornaments made from these seeds were conspicuous among the West Indian exhibits, and the seeds are also known as having been the originals of the carat weight, their uniformity of size having brought them into use in India as weights for gold.

WORMSEED.—Good green sifted seed in 1-cwt. bales is offering at 28s. per cwt.

THE AMERICAN MARKETS.

(From our own Correspondent.)

NEW YORK, October 4.

THE drug market has been fairly active, with a good demand, especially for the home trade. The following articles attract most attention:—

CASCARA SAGRADA.—Speculators have taken hold of this article, and are making strong efforts to raise the price to 90s. or over. They seized rather a favourable moment, for, owing to the extensive shipments to Europe, and deliveries to consumers, spot stock is small, and although large quantities are in transit and expected soon, they would not buy them, but forced up the market to 80s. for prompt delivery. There need be no fear of a scarcity, for large supplies will be available, but it is a question if any considerable decline in price will be seen. To arrive, the price of prime quality is 70s. per cwt. c.i.f.

MORPHIA.—Messrs. Powers & Weightman, the principal makers, raised their price 5d. per oz. on October 1.

OIL (PEPPERMINT).—It has become so customary for the London market for the H.G.H. brand to be below the prices ruling here that it was no surprise to hear of sales in London at 11s., full London terms. This is equal to £2.35 here, and when it is stated as a fact that at the same time sales were made in London at 11s., several hundred cases changed hands here at \$2.45, or 5d. per lb. higher, it is plain that somebody must have been losing money. The market for this brand is to-day \$2.50, or equal to 11s. 6d. London terms, and several sales were made at this figure.

QUININE.—This article is slowly improving, and as the consumptive demand is still very large, it is thought that the improvement will continue. The trade is in a very healthy condition, for a great number of the old speculative lots have gone into consumption, and the dealers all over the country refrain from speculating, but buy for their regular wants only. The price for *German* in bulk is to-day equal to 1s. 3d., 5 per cent., and there is a good demand at that price.

SENEGA ROOT.—There are two parties out in the North-West struggling over this article: one faction says there are large supplies in sight, and that much lower figures must rule. The other faction maintains that supplies are small, and although probably enough for the consumptive demand, prices should be higher. As a matter of fact, the stock in New York has not been so light for years, and when dealers here try to secure supplies from the “bear” faction in the West, they are told to wait and they will get all they want. They have been waiting a month now, without getting any at the low prices talked of, and even by raising their offers over the prices asked cannot get supplies. Another month will show who is right; but in the meantime this root is not dear at the present price, 1s. 9d. c.i.f., and consumers will be safe in securing what they will require for the season.

SPERMACEI has advanced to 11½d., and is tending higher. The European markets should be well supplied, as very large consignments have been shipped to them lately.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish: if you do not, please use a distinctive nom-de-plume.

Write on one side of the paper only; and devote a separate piece of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers, please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

Before writing for formulae consult the last volume, if you have it.

Letters, queries, &c. will be attended to in the order received.

Patients at the Pasteur Institute.

SIR,—Having had the misfortune in August last, along with three other persons, to be bitten by a collie dog affected with rabies (since confirmed by practical experiments), it was thought advisable by the medical authorities consulted that we should proceed at once to Paris and undergo a course of Pasteurism for the prevention of hydrophobia; and, as it may interest your readers to know the course pursued in these cases, I beg to send you these few particulars.

Acting on the advice thus given, the journey was undertaken without further delay. In two of the cases, the victims being children, it was necessary the mothers should go with them. Arriving in Paris, we were received at an hotel in the Rue Gay Lussac—a name not unknown to chemists—situated in the Latin, or student, quarter. The proprietor's wife, being English, is in touch with the Lord Mayor of London and M. Pasteur. The hotel at the time of our visit contained some ten or twelve English persons bitten by dogs, and undergoing treatment. The "Institut Pasteur" is distant about one mile and a half from the hotel, and the fresh-comers are taken each morning by Madame to the institute and introduced to the secretary, who enters the names and particulars of each patient in a book. As none of the officers speak English to any extent, Madame does the interpreting for all comers speaking our language only. At 11 A.M. the work of inoculation begins. This is performed in an inner room. The new arrivals are taken first, and placed before the operator, who is seated. Receiving a glass hypodermic syringe, with metal point, and holding about 2 drachms of liquid, from an attendant, he inserts this in the region of the stomach, the flesh being bared for that purpose, and the contents of the syringe containing the virus injected into the patient's system. This for five days is done on the right side and on the left, and for the ten following days on one side only, making fifteen days for the entire process. Should, however, the patient have been unfortunately bitten in the face of head, the treatment is continued for a month, and for some portion of that time the operation is performed both morning and afternoon. The punctures cause a sufficient amount of pain to make one long for the end of the treatment; and it was for the most part but with quivering nerve we faced the morning's ordeal. There was one little chappie, however—an English boy from our hotel—who had such unflinching courage and hardihood that he would face the operation with "Good morning, sir," and leave the operator with "Thank you, sir." We, unfortunately, were unable to carry the matter off with so easy an air. The puncture-wounds heal up very rapidly, and no fear is entertained with regard to suppuration, as every precaution is taken to have the syringes thoroughly purified by heat before using a second time. The patients come from all parts—Italy and Holland, Arabia and Ireland—and numbered during our visit about sixty, all told, amongst them quite a number of little children. It was interesting to notice how truly our great Shakespeare had said, "One touch of nature makes the whole world kin." An Arab used to take his turn with us, and though we were unable to converse together, there was a pretty thick chord of sympathy between us in the throes of suffering—the language of our common humanity was sufficient

to draw us closely together in the hour of trial and difficulty. The "Institut Pasteur" consists of a series of buildings situated in a pretty garden enclosure, fronted by masonry and handsome iron railings, with keeper's lodge, &c. The main and centre building is the residence of the chief, M. Pasteur. Another building jutting out from the main one is for the reception of patients, and contains, besides the central hall, the secretary's, the operating, dressing, and other rooms. There are several outbuildings containing the animals—dogs, rabbits, and guinea-pigs—from which the hydrophobic virus is procured. This, I understand, is manufactured after the following manner. A portion of the brain or spinal cord of a mad dog is injected into the brain of a rabbit, who becomes hydrophobic in fifteen days, from this rabbit another is inoculated, and another, and another, and so on until a rabbit is obtained that goes rabid and dies within seven days. The spinal cord of this having been disinfected and dried in hot air, its virulence is reduced to *nil*. We have now a series of hydrophobic matter ranging from zero to a strength that will kill in seven days. The first day's patients, then, are inoculated with comparatively harmless matter, and as the system gets accustomed to the poison, stronger and stronger is introduced, until at last the strength is so virulent that it would in all probability prove fatal to an unprotected person. I need not therefore say great care is taken in classifying the patients. I believe the virus is digested with pepsin in mutton-broth or beef-tea, and this solution used for the treatment. It need hardly be said that the whole staff, from the chief downwards, showed the utmost kindness and attention, and that the buildings are a very pattern of neatness and good taste. We English, however, were only too glad to bid adieu to "la belle France," and to turn our face to dear old England.

Yours truly,

S. G. (143/70.)

Mr. Blunt's Process.

SIR,—The process for titrating alkaloids by Mayer's solution has received a good deal of criticism from one and the other, and it is pretty certain that in very many cases the results of the application of the process have been greatly misleading.

I had something to say about it at the first meeting of the Conference at Bath. More recently Dr. A. B. Lyons, in his excellent "Manual of Practical Pharmaceutical Assaying," 1886, has attempted to define the conditions under which an approach to accuracy might be expected.

Mr. Blunt's idea is very neat, and in theory perfect, but I have great doubt as to its practical character. I need not insist here on the many difficulties and anomalies that beset the subject, but would ask Mr. Blunt if he would, for the good of pharmacy, continue his experiments, and let us know how the new process works when applied to the various alkaloids commonly met with in pharmacy, whether in natural combinations or in a state of comparative purity, whether more or less dilute, and so on.

I would point out that the compound formed is a double hydriodide of the alkaloid and mercury, and that the iodine removed from solution by the alkaloid will have to be considered in making the calculations.

Yours truly,

Weymouth, October 15.

THO. B. GROVES.

The Title "Wind Pills."

SIR,—I have this week received a letter from Mr. Page Woodcock threatening me with prosecution through the Trade Marks Association unless I discontinue putting up small boxes of pills and labelling them "Wind pills," as he claims to have registered these words as his trade-mark. I am sorry to appear to doubt Mr. Woodcock; but these words form part of the English language, and as such should be the common property of all Englishmen, and I cannot understand how he succeeded in registering such a title. I have always thought that the recent Act was framed to prevent this absorption by individuals of our mother tongue, and that no words of a "descriptive" character could be registered unless in connection with a maker's name, or forming part of a device, or in addition thereto. I think it will be news to most chemists that such a trade-mark

can be registered, and I have no doubt that there will now be a rush to register such titles as "Liver pills," "Cough mixture," "Indigestion mixture," "Tic powder," &c. My sale for the pills in question happens to be very small, and not worth fighting about, though the principle involved is of some importance. However, I have written Mr. Woodcock that I will withdraw the labels if you confirm the registration, as I have no file of *Trade Marks Journals*.

Yours respectfully,

Nottingham, October 15.

R. WIDDOWSON.

[Mr. Page D. Woodcock's registration of the title "Wind pills" is announced in the *Trade Marks Journal*, February 27, 1878, and was advertised in the journal of November 14, 1877. Mr. Woodcock has *prima facie* exclusive right to that title. In resisting any prosecution by him for infringement of his rights it would be necessary to apply for removal of his trade-mark from the register. As an encouragement to litigants it may be mentioned that Mr. Eno's title "Fruit salt" was advertised in the same number of the *Trade Marks Journal* as Mr. Woodcock's; and the registration of the two marks is also announced in the same number. When Mr. Eno's mark was challenged, in the case of *Eno v. Dunn* (see THE CHEMIST AND DRUGGIST, February 2, 1889), his counsel abandoned the claim to the exclusive use of those words simply. They said the words had been used before 1875 simply as the salient part of a label; they admitted there had not been such user as the Act required.]

Methylated Spirit and External Applications.

SIR,—One of the excise officers stationed here purchased a bottle of toothache essence of me, and a little while afterwards the supervisor called in company with the officer, and informed me that the toothache essence had been analysed, and found to contain S.V.M. I admitted this, stating that I used lin. aconit. meth. He informed me this was illegal, and later on I received a "caution," written and sent "by order of the Board of Inland Revenue." I then wrote to the Board, inquiring why they had cautioned me; was I acting illegally in using meth. aconite liniment? They replied:—"The privilege of making certain liniments from S.V.M. was granted in the view that they would be exclusively used for external application, and it was never contemplated that under any circumstances they would be allowed to enter as component parts of a medicine intended for internal use. The odontic is regarded as being so used, as it is intended to be applied to the tooth, and not externally to the face. You cannot be allowed to use liniment of aconite prepared with S.V.M. in the preparation of odontic." I replied, making the following inquiries:—Is there any illegality in my selling any mixture containing methylated spirits, provided the said mixture is "absolutely for external use"? for instance, if I make a liniment may I not make it entirely of S.V.M. if I choose? Also, in case you rule that it is illegal for me to use S.V.M. in the manufacture of external applications, whether this ruling would also apply to a trader not holding a S.V.M. licence? Or whether such a trader would be free to use S.V.M. in the manufacture of *bona-fide* external applications?

The secretary replies:—

"I am directed to acquaint you that the question of the legality of selling mixtures containing S.V.M. for external use does not depend upon the fact that these mixtures are alleged to be intended absolutely for external use, but as to whether they are wholly incapable of being used internally as a medicine. The rules dealing with the manufacture of external preparations containing S.V.M. apply equally whether the trader holds a licence for the sale of meth. spt. or not."

The decision that the application to the tooth constitutes "an internal application" seems very absurd, and I venture to say that these fine distinctions are calculated to bring her Majesty's Board into ridicule. It certainly is straining the point very much. However, the trade will gain the information, and can overhaul their stock before they are pounced on; whilst the exposition of the secretary on the legality of selling mixtures containing methylated spirits may also be of service. I enclose sample of label used, and remain,

Yours very truly,

39 Bridge Street, Cardiff.

ALBERT HAGON.

The label reads thus:—"Odontic, for toothache. To be

applied on wool, and also to be gently rubbed on the gums with the finger. Prepared by A. Hagon, manufacturing chemist, Cardiff."

The Paris Awards.

SIR,—In your leading article of October 5, about the Paris Exhibition, especially cod-liver oil, you have the kindness to mention the Norwegian Section. As I was the juror from Norway for that party, allow me to tell you that exhibitors were informed that the jury would call on a certain day, and suggesting that they should change their samples, which had been exposed for a long time. The samples of white cod-liver oil were put in ice for about twenty-four hours before we saw them.

I had the same task as juror at the Paris Exhibition in 1878 and at Liverpool in 1886. I was appointed by the government proposed by the special committee, consequently not "self-appointed," as your correspondent states. Perhaps your correspondent knows better judges among his friends. I am a chemist since forty-three years, and have been one of the largest exporters of white cod-liver oil for many years. With me were Messrs. Riche and Jungfleisch, of the Académie de Médecine, and professors at the high school of Pharmacie at Paris, Mr. Vée, chemist and owner of a large drug house at Paris, and Dr. Hogg, chemist, of Paris.

I regret that Sir Roscoe was not present, although he was one of our class. Very likely he would have equaled your conscientious correspondent (who ought to have been chosen from England), and spared him, the world, and yourself, the bitterness, brought up to the "boiling-point," by us.

Bergen, in Norway,

October 11.

Yours truly,

L. MONRAD KROHN.

Dental Education.

SIR,—Your recent editorial on "Dental Education," able as it was in most respects, had "a sting in its tail" that conveyed to the reader altogether too flattering an opinion as to "American (?) dentistry."

You appear to have been somewhat misled regarding the relative merits of dental education as pursued in this country and in America. During the recent legislation on dental education, we in courtesy advocated the recognition of two American colleges—Harvard and Michigan—because we did not wish to be exclusive, and also because we believed them to be—unlike many American colleges—competing for pupils in an upward, rather than in a downward, direction, and were endeavouring to turn out their pupils good dentists rather than in as short a space of time as possible to turn out pupils with the high-sounding title of Doctor, independent of either operative or mechanical skill, provided the necessary educational fees had been paid, as was the case in some others. But in so doing we did not for a moment admit that either of these institutions was our superior in teaching, or at all our equal in the matter of examinations, or in the knowledge exacted from the candidates for the diplomas. We distinctly demur to your statement that the so-called "American dentistry" is in advance of what is taught and practised in England by the scientifically educated members of our profession.

The school of which I have the honour to be Dean is open to your inspection any morning, when you will realise that the dental student in England is not only an expert and competent operator, but also gentlemanly enough to be modest in his pretensions, and most unlikely to institute comparisons which would involve such self-laudation as is incompatible with self-respect.

Regarding your remarks about using the titles of certain American colleges, which are here unregistrable, the recent trial in Birmingham indicates that such a course is certainly fraught with danger.

Your obedient servant,

MORTON SMALE,

October 15.

Dean, Dental Hospital of London.

Price of Dispensing Prescriptions.

SIR,—I notice a paragraph in your journal of September 21 that it was difficult to know what to charge for medicine without a universal trade-mark. I may say, so it would be

difficult to know what to charge on first dispensing with a universal trade-mark, as the other day I made up a bottle of medicine and charged 1s. (it was marked *sic*—F/-). My neighbouring chemist next made it up and charged 9d. Of course you can guess the rest, and how useful a regular trade-mark might be.

Yours, &c.

(1) 30j. 12 PARTS. (99/33.)

Milk of Cucumbers, &c.

A French correspondent sends us the following:—

P. saponis hisp. alb.	3ss.
P. boracis	3ij.
Ung. cucumeris	3ij.
Aq. laurocerasi	3iij.
S.V.R.	3iij.
Aq. destil. ad	3xlviij.

Rub the cucumber ointment (a good brand, such as Adrian's, of Paris, or Warrick Bros', of London, should be used) with the powdered soap and borax into a uniform paste, triturate for a few minutes, then add the distilled water little by little; finally, add the cherry-laurel water and spirits of wine.

If this milk is too thin for some, of course less water can be added. The emulsion, if carefully made, is permanent, and has the advantage of being prepared in a quarter of an hour. The question of perfume is left open, as depending upon taste and price, but, as intended for the skin, no strong odour should be used. Millefleurs, violet, or ess. bouquet seem to be amongst the most suitable. The same base—viz., soap, borax, and cucumber—emulsified with eau de rose forms an excellent milk of roses; and, omitting the laurel-water, with tincture of orris it forms a lait d'Iris; and may also make the base of an active skin lotion, containing 1 gr. bichloride mercury to the ounce, tinted a pale rose colour—in fact, it may be put up in a variety of styles.

Perfumery Formulæ.

SIR,—I send you eight additional recipes for eau de Cologne:—

Eau de Cologne.

Ess. bergamot.	3ij.
„ limonis	3sss.
Ol. aurant. nov.	3ss.
„ lavand. Ang. (Mitsbam)	3liiss.
„ rosmar. Ang.	3ss.
„ neroli super.	3ss.
Ess. moschi	3j.
Ol. origan. pallid.	3ij.
Aque flor. aurant. conc.	3xj.
Sp. v. r. (60 o. p.)	cong. ij.

Mix.

Ess. bergam. extra-super.	3ij.
Ol. rosmar. Ang.	3ss.
„ neroli super.	3ij.
„ menth. sativ.	3viij.
„ caryoph.	3vj.
Sp. v. r.	3xxviij.
Aque rose conc.	3iv.

Mix.

Ol. neroli super.	3iv.
„ cedrat.	3ij.
„ lavand. Ang.	3ss.
„ bergam.	3ij.
„ rosmar. Ang.	3ss.
Ess. jasmin.	3iij.
Sp. v. r.	120 fl. oz.

Mix.

Eau de melisse	20 fl. oz.
Ol. cedrat.	3iij.
„ bergamot.	3ij.
„ citron.	3iij.
„ origan. pallid.	3xij.
„ rosemary Ang.	3liiss.
„ lavand. Ang.	3j. 3xxiv.
„ neroli super.	3iij.
Sp. v. r.	cong. j.

Mix.

Sp. vin. rect.	3xx.
Ol. citron.	3xxiij.
„ cedrat.	3xxiij.
„ lavand. Ang.	3xj.
„ neroli super.	3xxiij.
„ origan. pallid.	3ij.
„ rosmar. Ang.	3xxv.

Digest one month and add

Eau de melisse	3iv.
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Mix.

Ol. neroli	3vj.
„ rosmar. Ang.	3ss.
Ess. jasmin.	3j.
„ bergamot.	3ss.
Sp. v. r.	cong. j.

Mix.

Ol. limonis opt.	3iij.
Ess. bergamot.	3ij.
Ol. rosmar. Ang.	3ss.
„ neroli super.	3j.
„ lavand. Ang.	3j.
Sp. v. r.	3xxviij.
Aq. destil. ad	0j.

Mix.

Ess. millefleur	3vj.
„ limonis	3ij.
„ cedrat.	3j.
„ bergamot.	3ij.
Ol. aurant. nov.	3ij.
„ neroli opt.	3ss.
Sp. v. r.	3xxviij.
Aque flor. aurant.	3iv.
Alum. ust.	q. s.

Mix.

Yours faithfully,

Saffron Walden, September 11.

HENRY MACHON.

Notes from an Assistant.

Be very careful in making *Liq. bismuth*. I made it in a mortar apparently clean, but the product was too dirty to use.

Liq. ammon. is not always satisfactory, though made according to the B.P. It is frequently too thick; the addition of a little water (3j. in 3iij. lin.) will make it all right.

Hebra's ointment.—The following gave me some trouble:—

Emp. plumb.	3j.
Ol. oliv.	3j.

The plaster would separate and form hard lumps, though it was stirred constantly whilst cooling. The addition of a little water was the sovereign remedy.

SQUARE (Clapham).

Glass Acid Tubes.

SIR,—Among the little reforms which might be made with advantage is the reduction of the bore of tubes used for taking acid and other medicines. I have in my hand three such, the fluid capacities of which are 1½, 2, and 2½ drachms. These are very suitable for apprentices to drink lemonade or sherbet from, but are decidedly “windy” when used for an ordinary dose of mixture. Makers of these articles will soon take the hint, and use smaller tubing, if the matter is brought before them.

Yours truly,

HEDER. (144/9.)

The Formulæ Hypophosphites.

SIR,—I have made several lots of syrupus hypophosphitum compositis according to the B.P.C. Unofficial Formulary (1888), but cannot get it satisfactory. It becomes cloudy in a few days, and deposits a white precipitate on the bottom and sides of the bottle. How can this be obviated?

EBOR. (143/30.)

A Hint.

SIR,—In making the tinct. quin. ammon. B.P., if the quinine is first added to the S.V.R., and well stirred, then

the water added to form proof spirit, well stirring, finally adding the solution of ammonia, a perfectly clear solution will be effected without the aid of heat.

I consider this due to the action of latent heat given out during chemical combination.

Haywards Heath, October 9.

R. O. HAYES.

DISPENSING NOTES.

The opinions of practical readers are invited on subjects discussed under this heading.

Phosphoric Acid in Pills.

SIR,—During the past few weeks I have made several dozens of pills from a similar formula to that quoted by "Phosphorus" in your last issue. I have experienced no difficulty in making them, and do not think the addition of tragacanth and liquorice-powder necessary or desirable to such a large extent as you recommend. The formula from which I have worked is found in Martindale's "Extra Pharmacopœia," page 193. On the addition of the acid the mass becomes very soft, but after about two minutes working it begins to harden, and unless very quickly rolled out becomes too hard to do so.

I have now before me a few pills left over from a batch made on September 23 in the manner indicated, and they are a good shape, perfectly smooth, and quite hard.

I am, yours truly,

Richmond, S.W., Oct. 9.

CHARLES W. ANDREW.

Spt. Chlorof. Co.

SIR,—This I frequently get to dispense, and always have used the compound tincture, and firmly believe it to be the prescriber's intention, as he often orders spt. chlorof. and spt. chlorof. co.

Yours truly,

AQUA MENTH. (149/6.)

SIR,—I should inquire of prescriber, if possible, but, if not, should use tinct. chlorof. co.

Yours truly,

WILTS. (149/9.)

SIR,—I have recently had two prescriptions ordering "spt. chlor. co." In both cases I used the compound tincture without any hesitancy. Surely the medical man would not add "co." after the word if he wished a simple spirit to be used.

Yours truly,

October 15.

DOLOR. (151/50.)

Quinine Mixtures.

SIR,—I noticed in your journal the other week a note on a mixture containing ferri et quin. cit. and potass. cit., which you said could not be dispensed to form a clear solution. I dispensed the following mixture the other day :—

Potass. cit.	..	..	..	..	gr. 72
Sodii bromid.	..	..	..	..	3iss.
Ferri et quin. cit.	..	..	..	..	3ss.
Æther. chlor.	..	..	..	..	3j.
Aq. ad	..	..	..	..	3vj.

and found that by first dissolving the potass. cit. and sodii bromid. in part of the water, and then placing a funnel in the bottle, and throwing the ferri et quin. cit. on some tow, and dissolving it by pouring the remainder of the water on it, that a clear mixture resulted, which remains clear now. Perhaps this may be of interest to your readers, and one of them can give me an explanation.

Yours truly,

Newport, Salop, October 15.

JUNIOR. (151/45.)

How Some Doctors Write.

A correspondent favours us with a prescription which he has recently dispensed, and the writing of which is the most

slovenly specimen which we have seen from the pen of an educated physician. We can only afford space for one line of it, and even this is slightly reduced :—

LEGAL QUERIES.

14/27. *Aqua*.—It is legal for non-registered persons to sell precipitate ointment and mercurial ointment. We cannot give you the formulæ of the proprietary articles you name, and we cannot spare the time to analyse the mixture you send.

146/69. *J. W.*—You may sell methylated finish without a licence. One licence for the sale of methylated spirit will suffice, we believe, for more than one establishment; but it is absolutely necessary that the premises be entered with the excise before the licence is granted.

145/67. *Enquirer*.—The declaration for the Minor examination must be made by yourself; but it has to be certified by a pharmaceutical chemist, chemist and druggist, or medical practitioner, but it is not essential that he should have been your employer.

146/6. *W. F. G.*—We do not think it would be illegal for a person not registered as a dentist to make the announcement "First-class dentistry in all branches on the most approved principles." No name or title, addition or description, is assumed. We may remark, however, that the announcement is rather weak in its syntax.

139/11. *Patent Stamp*.—The purchaser of a medicine liable to stamp duty is not at liberty to resell in any manner unless he is the holder of a medicine licence.

148/54. *Vet.*—If we knew what evidence you had offered to the Pharmaceutical Council we should be better able to judge whether they had reasonably or not refused to prosecute. Why not ask the secretary for a reason? We cannot advise on an imperfect knowledge of facts.

150/7. *W. G. M.*—A surgeon and apothecary is not entitled to call himself a physician, but we do not think he is liable to a penalty for so doing.

149/28. *Doubtful*.—It can hardly be doubted that Easton's syrup is in the legal sense "a preparation of strychnine," and as such should be sold with the formalities required in selling articles in the first part of the Poisons Schedule.

MISCELLANEOUS INQUIRIES.

A large number of correspondents ask us for formulæ and other information already published in this journal. It is not fair to more careful readers that we should frequently repeat such information, and so long as the back numbers containing the formulæ or replies required are in print we must decline to do so. Back numbers of our weekly issue can be obtained from the publisher at 4d. each.

139/1. *Juvenis*.—We presume that it is *Fumigating Pastilles* that you require the moulds for. They are not generally used. The simplest and most expeditious way is

to roll some of the pastille mass into a roll like a pill-pipe, cut it off into suitable lengths, and form each bit into a cone by pressing and turning with the spatula.

138/16. *Square*.—(1) Properly, yes; but we do not think that the authorities would insist upon a licence for the sale of small quantities of pepsin wine. (2) Benzoinate the lard. (3) Sodium sulphide rapidly deteriorates, so does depilatory containing it. (4) The following *Pastilles* do not dry properly:—

Benzoin	1/2 oz.
Tolu balsam	1 drachm
Charcoal	4 oz.
Nitre	6 drachms
Essential oil	1 1/2 "
Acacia mucilage	q.s.

It might be better to make a mass with the resins dissolved in a sufficiency of spirit, and omit the mucilage. (5) See our issue of November 3, 1888, page 637, for non-silver marking-ink. (6) Sesame oil is not soluble in rectified spirit.

138/23. *Spider*.—Try sandarac varnish for the pills, and allow to dry in the air for about a week before coating.

We have received a post-card from Cuba this week, which has nothing on it except our address. If the sender desires to ask us anything, we shall be glad to hear from him.

A. B. C., R. H. D., and others will find their inquiries answered on another page.

135/4. *Yorkshire* asks:—(1) "What is the cause of salt of lemons going damp and discoloured, so much so as to become useless? The discoloration looks more like patches of ironmould than anything else. The salt is kept in a stoppered bottle, and made, as usual, from sal acetos and pot. bitart." [We have thought of this matter often, but have always had to content ourselves with the vague explanation that it is "due to metathetical change"—which is the scientific way for saying, "We do not know."] (2) We have not met with a fungoid growth in rose water (2 parts) and glycerine (1 part).

143/9. *Shampoo*.—Dried carbonate of soda will do for the shampoo powder.

143/44. *Benzoin*.—We never heard of the acid.

143/12. *Aq. Rose*.—Twenty-five drops of otto of rose are sufficient for 40 oz. of *Rose Water*. Do not use magnesia or spirit. Simply put 40 oz. of hot water into a Winchester, drop in the otto, and shake well. Set aside for a day or two, then filter through a filtering-paper which has been dampened with plain water.

143/20. *Waxy*.—To purify your honeycomb wax, boil with several quantities of fresh water. You may add to the second water a few grains of permanganate of potash and acidulate with sulphuric acid.

136/9. *P. P. P.*—The *Viscosity of Oils* is tested with a specially-constructed apparatus, consisting of two cylinders, one within the other. The inner one contains the oil and the outer one is for hot water. The viscosity is judged by the time which it takes for 100 c.c. of the oil to run out. (See Cameron's "Oils and Varnishes," page 303.) Viscosity is also tested by noting the time that a few drops take to flow down an inclined plane of glass, and it may even be tested by allowing a measured portion to run out of a pipette. There is no fixed standard; the time taken by each oil being expressed in the number of seconds at certain temperatures, 10° C., 20° C., or higher degrees.

143/7. *Pil. Rhei*.—(1) *Soap Stone* or French chalk is a silicate of alumina and magnesia, found principally in Cornwall. (2) *Cement for Leather on Iron*.—Make a hot solution of gelatine and wash the metal with it; having steeped the leather in a hot decoction of galls apply it to the metallic surface, and leave under moderate pressure.

143/16. *Quercus*.—"The Art of Leather Manufacture," by Alex. Watt. (Crosby Lockwood. 12s. 6d.)

143/27. *Modus Operandi*.—*Violin Varnish*.—It would be much better if you would state the difficulties which you have experienced. The following formula should give you no trouble:—

	Parts
Sandarac	12
Shellac	6
Mastic	6
Elemi	3
Spirit	150

Dissolve by shaking, then warm and add

Venice turpentine.. .. . 6

Allow to stand until clear, and colour the clear portion with Brazil wood or dragon's blood.

142/36. *H. S. U.*—You will find an article on face-paints and powders in THE CHEMIST AND DRUGGIST DIARY, 1889, page 167.

135/36. *J. W.*—The Westminster College of Pharmacy fee for the fourteen weeks' course of instruction (Minor) is 9l. 9s. In our Educational number "course" is a misprint for "term," so far as this instance is concerned.

134/33. *Potass. Iodid*.—The following are the best works on *Assaying*:—Mitchell's "Practical Assaying," edited by Crookes (Longmans, 31s. 6d.); North's "Practical Assayer" (second-hand copies of the 1874 edition can be got for about 5s.); and Percy's "Metallurgy" (there are various volumes of this: one treats of gold and silver, another of iron and steel, and so on. Prices from 30s. to 3l. 3s.). If these are not within your reach get Hiorns's "Practical Metallurgy and Assaying" (Macmillan, 6s.).

137/52. *T. B.*—Your marking-ink appears to be a solution of an aniline black, but we cannot furnish analytical data sufficiently trustworthy to base a formula on. The solvent has the odour of amyl alcohol.

140/46. *Nux*.—The causes of the deposit in *Tincture of Nux Vomica* are: (1) change in the constituents of the extract during evaporation, and (2) difference between the tincture spirit and that used for making the extract. The deposit consists chiefly of fatty matter, and if the tincture is set aside for a few days before it is filtered there should afterwards be no objection to it.

Scientist and others who do not send their names are reminded that this is an infringement of our rules. *Athenian, Junior*, and *An Objector to Gas* are also included in this rebuke.

143/43. *Coal*.—We should think your best plan in getting up a *Lecture on the Chemical Productions of Coal* would be to consult a good encyclopædia. "The Gas Engineers' Chemical Manual," by Wanklyn (Scientific Publishing Company, 5s.), although not exactly on popular lines, should serve as the basis for inquiry.

143/6. *Festine Lente*.—(1) You will find all that you want to know regarding sugar, its uses, &c., in Johnston's "Chemistry of Common Life" (7s. 6d.), which can be obtained through any bookseller. (2) We do not have the information.

144/43. *T. & T.*—**Roseine** is used by pork butchers for mixing with brine, sausage-meat, &c., as a preservative. We find it to be coarsely-powdered boric acid coloured with cochineal.

143/47. *Assistant.*—The lotion for inflamed cow's udders contains solution of ammonia, camphor-water, and a little soap liniment.

143/56. *Junior.*—Apply to the secretary of the Pharmaceutical Society for the Bell scholarship questions.

144/71. *Apprentice.*—We have already published the information you desire, and expect that you and other apprentices have more time to look up back journals than we have.

144/56. *Subscriber* (Manchester).—(1) **Barbadoes Tar** is a natural petroleum found in the West Indian Islands, especially Barbadoes and Trinidad. Like American petroleum, it consists of a dozen or more paraffins. The tar varies in appearance, and in specific gravity from 0.735 to 0.878. (2) As a **Yellow Colour** for **Lacquers** you may use gum acroides, gamboge, picric acid, or an aniline yellow.

144/90. *Heder.*—Rectified spirit is a better preservative than water for **Oil of Lemon**; but the best way to keep it over the winter is to store it in perfectly full bottles. Many chemists sell as "essence of lemon" a solution of equal parts of the oil and absolute alcohol. This keeps indefinitely.

144/33. *Canary.*—**Nepaul Yellow Pepper** is one of the many varieties of capsicum used by bird-fanciers. It can be obtained from seedsmen.

144/30. *J. A. H.*—In making chlorodyne lozenges we understand that the best results are obtained by emulsifying the chloroform before it is mixed with the dry ingredients of the lozenges. We have no practical experience of the process, however.

145/69. *W. F. S.*—The molybdate test is about the best for detecting the presence of **Sugar in Glycerine**. Dissolve 5 drops of glycerine in 100 drops of water, add 1 drop of nitric acid and $\frac{1}{2}$ grain of molybdate of ammonium, and heat to boiling. If the glycerine contains sugar the solution becomes blue, if not it remains colourless.

146/53. *T. B. B.*—The principal works on perfumery are Piesse's "Art" (Trübner, 21s.), and Dussauce's "Practical Guide," also published in this country by Trübner & Co. You will find almost as much reliable information in Beas'ley's "Druggists' Receipt-Book."

146/73. *Dobbler.*—**Cough Mixture**.—We have published a large number of formulæ. The following is a simple yet reliable one:—

Chlorodyne	3ij.
Ipecacuanha wine	3iij.
Glycerine	3vj.
Water to	3vj.

Mix. Dose, a dessertspoonful.

146/45. *Henry.*—Read Huxley's "Physiology" and the article on blood in Watts' Dictionary.

148/34. *Ignoramus.*—We were under the impression that we had replied to your query. If you add a fair proportion of castor oil, say 1 part to 11 of **Collodion**, you will prevent the pyroxilin film from hardening; but there is no addition which would prevent the solvent evaporating less rapidly.

148/45. *Subscriber* (Berwick).—We do not have a formula for a preparation which would meet the description.

148/33. *Fiat Lux.*—We are surprised that you should require such information so soon after the Educational number.

148/48. *W. P. R.* wishes to know what powder is used by pork-butchers to make tripe swell when it is boiled. Can anyone tell him?

148/85. *Jalap.*—You should read all that has appeared in our "Medical Gleanings" during the past two years regarding the treatment of **Constipation**. It is now generally admitted that the regular administration of purgatives is a mistake, especially in the case of young persons. The best curative factors are careful dieting (brown bread should only be eaten, and oatmeal porridge should be taken in the morning or for supper), plenty of exercise, and regularity in going to stool once a day. Sir Andrew Clark's dinner pills may be taken to assist nature until a healthy condition is restored.

147/64. *Amicus.*—We print a number of formulæ for **Nursery Hair Lotion** in the DIARY. Is there none to suit you?

147/59. *Tontine.*—The dose of the catarrhine is a teaspoonful every three hours. May be given hourly in acute cases, for 6 or 8 doses.

147/74. *Scotie.*—See the DIARY.

149/7. *Thistle.*—(1) **Lanolin Cold Cream**:—

	Parts
Lanolin	50
Almond oil	5
Vanillin	0.1
Otto of rose	0.05

Mix.

A little rose-water—say 15 parts—may be added with advantage. (2) Why not omit the sulphurous acid?

149/3. *Syrup.*—(1) Benedict's "Chemistry of the Coal-tar Colours" (George Bell & Sons, 5s.). (2) None except yellow berries, turmeric, barberry root, and quercitron bark. One or other of these should suit you.

149/14. *A. Orme.*—Please read our Educational number, or apply to the Secretary, London University, Burlington House, W.

120/23. *B. Ram.* (Umballa).—Baillièrè, Tindall & Cox, London, publish a series of diagrams of the human body, which show both the superficial and internal structure.

Information Wanted.

[Replies to the following requests are solicited by correspondents of THE CHEMIST AND DRUGGIST.]

127/67. What is the composition of slow-burning coloured fires?

132/38. What is kernel oil, and what is ol. gallicum?

143/29. What is the formula for Lathom's salicylic acid pills; or where can they be obtained?

146/6. Address of S. A. Freeman, maker of perfumes.

149/3. **Check Tills.**—An invalid subscriber wishes to know what kind is used; is it objected to by the assistants; does it interfere much with business, and does it answer its purpose?

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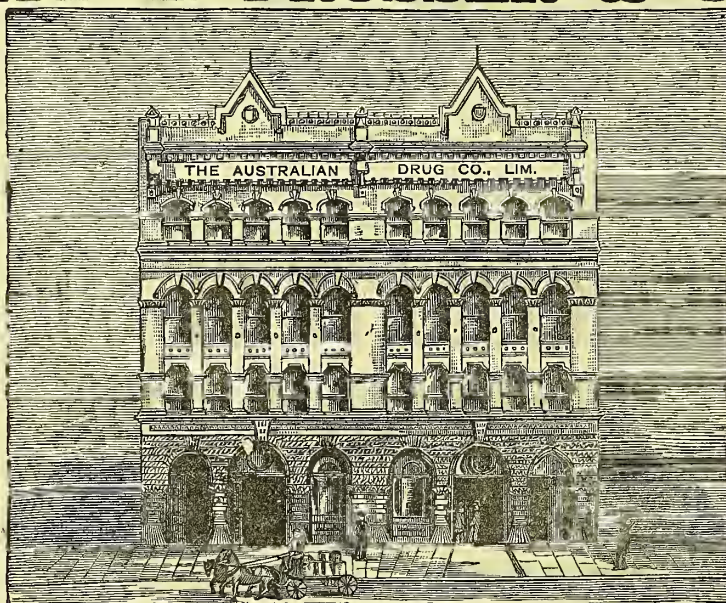
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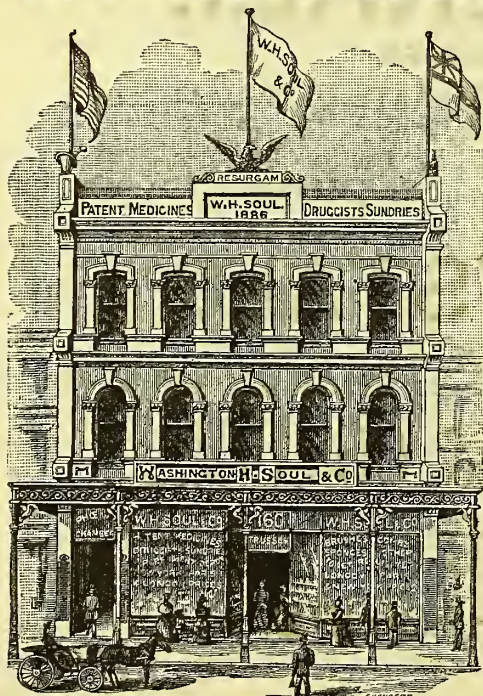
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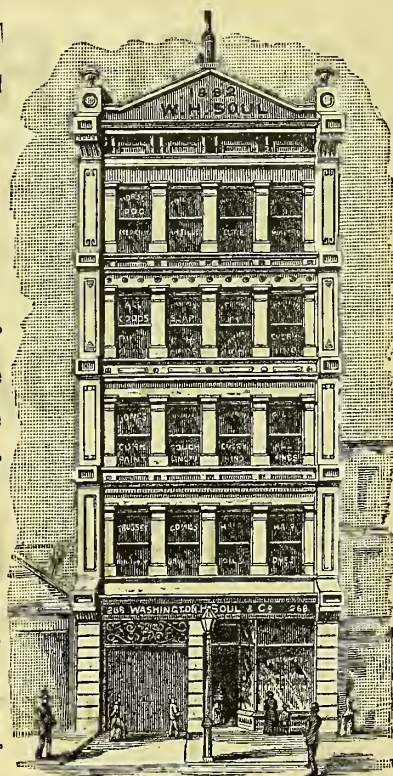
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Wholesale Agents for Bosisto's Genuine Oil of Eucalyptus.

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KEMPTHORNE, PROSSER & CO.,
NEW ZEALAND DRUG COMPANY, LIMITED,
 Wholesale Druggists,
 MANUFACTURING CHEMISTS, AND COMMISSION MERCHANTS,
 Head Office and Factory, DUNEDIN.

BRANCH HOUSES:

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 Hunter Street, WELLINGTON,
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Patent and Proprietary Medicines Agency.

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Our Extra Steam Refined Oil is treble distilled and twice rectified by steam, by an entirely new process and in apparatus of our own invention, by which all these polymeric products

is in firm, hard, dry and snowy white crystals, entirely free from oily contamination (and therefore of the highest melting point.) As the original and largest manufacturers in the world of the true Japan Menthol, we guarantee our brand to be absolutely pure. Beware of substitutes. For full particulars, therapeutic uses, etc. see special circulars to be had on application.

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of a tarry and resinous nature which are objected to by some consumers are extracted. It is of water white colour, retaining the full aroma, pungency and strength and guaranteed absolutely pure and soluble in spirits of wine.

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Established 1868.

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Cod Liver, Fish and Orange Oils, Vegetable Wax and Isinglass.

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This is the genuine essential oil as produced in the manufacture of the Solid Campher of Commerce. Our brand is guaranteed to be the natural oil and not the fictitious mixture of refuse Campher and Turpentine generally sold. Having made a special study of its manufacture we have succeeded in producing a colourless oil and entirely free from any smell. It is a remedy in Rheumatism, a good solvent of resins, and the most perfect article for the use of the essential oil distiller.

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Correspondence invited. Special facilities for introducing new lines.

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LUCKNOW, OUDH, INDIA,

Possess exceptional facilities for the introduction of NEW SPECIALITIES, Patent Medicines, Druggists' Sundries, Perfumery, &c.

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CARBONATE OF LITHIA

Price 1,400 fcs. per 100 kilos., or £27 15s. per cwt.

Also all other LITHIA SALTS.

Iodoform, Mercurial Salts, Osmic Acid, Liquid Chloride of Methyl, for the treatment of Rheumatism, Neuralgia, &c.
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SILVER BLACK FOR JEWELLERY.

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Successor to FONTAINE, PELLETIER, & ROBIQUET, Members of the Paris Institute.

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Telegrams—"Fuerst London."

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PURE CONCENTRATED
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We make a full line of RESINOIDS, such as PODOPHYLLIN, LEPTANDRIN, EUONYMIN, IRISIN, HYDRASTIN, &c., ALL PURE.

So-called Concentrations are in the market, called by the same name as manufactures, that are made by triturating extracts etc., with sugar of milk, powdered root, etc

WHAT ARE CONCENTRATED TINCTURES?

They are not made from the crude material, but by dissolving the active principles in Alcohol in definite proportions, and invariably represent a uniform amount of therapeutic power.

Send for printed matter on CON. TINCT. AVENA SATIVA in the Morphia or Opium Habit, and certificates from different members of the Medical Profession, citing cases under their charge, treated by it; also REVISED AND ENLARGED MANUAL; also Price Lists, to

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Special facilities for the Sale of
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Satisfactory references. Correspondence solicited.

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Distiller & Exporter,
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OPPENHEIMER'S CREAM OF MALT

(REGISTERED),

WITH COD-LIVER OIL,

AND THE

HYPOPHOSPHITES OF LIME, POTASH, AND SODA

Can be obtained from all Wholesale Houses, or direct from the Sole Manufacturers,

OPPENHEIMER BROS. & CO., Manufacturing Chemists,
1 & 3 SUN STREET, FINSBURY SQUARE, LONDON, E.C.

All
Wholesale
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PETER MOLLER'S
COD LIVER OIL

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SNOW HILL
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LONDON, CHRISTIANIA, STAMSUND, AND SYLTEFJORD.



FOR

LADIES
OF
FASHION

CRÈME SIMON À LA GLYCERINE.

MARVELLOUS FOR

Softening & Whitening the Complexion. Most efficacious for the Skin.

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SUPERIOR

TO

VASELINE

AND

CUCUMBERS

BUYERS ARE CAUTIONED TO SEE THAT THEY GET THE

GENUINE



DR. JOHN HOOPER'S PILLS,

Which may be known by the Name of the Inventor being on the Government Stamp.

Handbills and Show Cards will be sent on application to

MAY, ROBERTS & CO., 9 CLERKENWELL ROAD, LONDON, E.C.

AMERICAN BUYERS are particularly Cautioned!!

Telegraphic Address—"FEEDING BOTTLES LONDON."

LOFTHOUSE & SALTMER,
MANUFACTURING CHEMISTS, WHOLESALE & EXPORT DRUG MERCHANTS,
HULL,

Manufacturers of all Pharmaceutical Preparations on the best and most improved principles.
QUOTATIONS ON APPLICATION.

SOLUT. ÆTHERIS NITROSI (Æther. Hyponit.)

1 part to 5 Sp. Vini Rect. 56 o.p. makes Sp. Æth. Nit. 850.

This concentrated preparation, carefully drawn in our own laboratory, is highly recommended, and daily finding increased favour with the trade for making Sp. Nitre, as required for use, thus avoiding the risk of loss of Nitrous Æther, and the development of free acid, both of which are almost certain to occur in Spts. Nitre which has been some time drawn.

Price in 1lb. Bottles, 3s. per lb.; in Winchester Quarts, 2s. 10d. per lb., net.

Importers of Cod Liver, Castor, and Olive Oils; Otto de Rose, and all Essential Oils; Valerian Safron; Vanillas; Fruit Essences; Carmine; Aniline Dyes; Bees Wax, &c., &c. Applications for Special Quotations invited.

"CUTTING COUNTERACTED."

MOONSEED BITTERS brings FULL PRICES.

WHY?

Because every one who retails Moonseed Bitters has to sign an Agreement or Contract in the following terms:—



MOONSEED BITTERS.

Above is Facsimile of
THE WRAPPER LABEL
 of the 2/9 size.
 It is also sold at 4/6.

MOONSEED OINTMENT.

Retails at 1/1½, 2/9, 4/6 per box.

Memorandum of Agreement made this.....day of..... 1889, between A. E. POWELL & COMPANY, of Swindon in the County of Wilts, Proprietors of the Moonseed Bitters and Moonseed Ointment (hereinafter called the "Vendors"), of the one part and of (hereinafter called "the Purchasers"), of the other part.

Whereby it is mutually agreed between the said parties hereto as follows:—

In consideration of the Vendors selling to and supplying the Purchasers with Moonseed Bitters, Moonseed Ointment, and other preparations manufactured and sold by them (hereinafter termed "the Goods") at their usual prices, the Purchasers will observe and perform the following terms and conditions:—

1. The Purchasers to sell the Goods retail for full printed prices only, and for each and every Bottle or Box of Moonseed Bitters, Ointment, or Pills sold by him or them at any less price, without the written consent of the Vendors, the Purchasers shall pay to the Vendors the Sum of Twenty Shillings in the nature of a penalty, to be recoverable as ascertained liquidated damages.
2. The Purchasers not to supply any Wholesale House nor to sell the Goods wholesale to any Chemist or Druggist or Medicine Vendor who will not previously enter into an Agreement to retail the same at prices in accordance with the preceding Clause No. 1 of these presents.

All Purchasers who have signed a similar form of Agreement to the foregoing will be supplied upon the Vendors' usual trade terms, but those Purchasers who do not sign a similar form of Agreement to be supplied upon the following terms only, namely:—RETAIL, 4s. 5d. for each and every 4s. 6d. Box or Bottle, 2s. 8d. for each and every 2s. 9d. Box or Bottle, and 1s. 0½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. WHOLESALE, 4s. 4d. for each and every 4s. 6d. Box and Bottle, 2s. 7d. for each and every 2s. 9d. Box or Bottle, and 1½d. for each and every 1s. 1½d. Box or Bottle—net in all cases. This Agreement and the terms and conditions herein contained to remain in full force and virtue for the term of 7 years from the first day of March, 1889.

As witness the hands of the said parties hereto the day and year first above written.

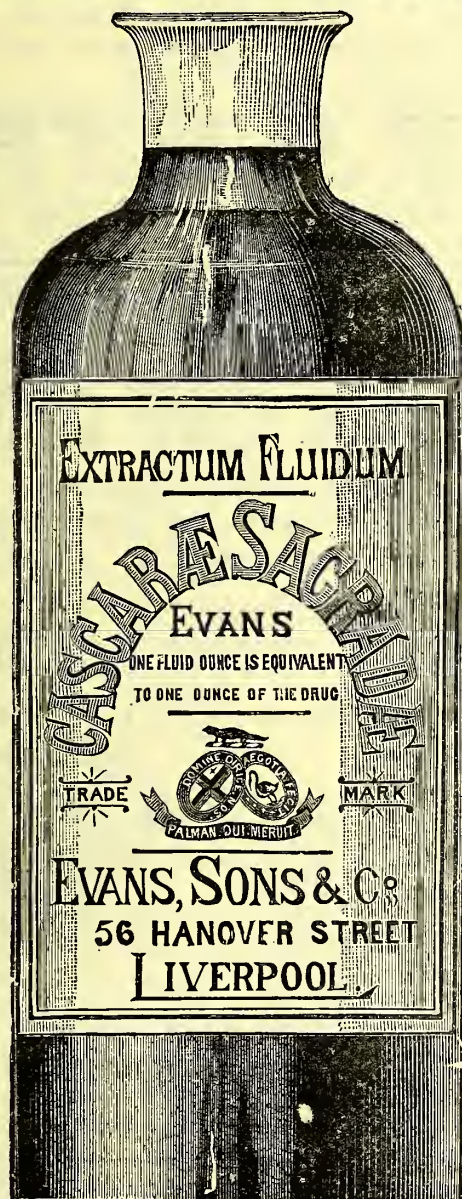
We call attention to the important steps which we have taken to prevent our specialities being retailed at less than the advertised prices, and we ask the co-operation of the Trade in maintaining the integrity of the scheme whereby the sale of our preparations may always be retained by the legitimate trade. We will not only endeavour, by all means in our power, to prevent the advertised prices being "Cut," but will give Chemists every assistance and facility for making this a large as well as a paying business.

Please write for Terms and Form of Agreement. NOTE that we allow retailers of Moonseed Bitters 2s. 6d. per thousand for the Distribution of Pamphlets.

A. E. POWELL & CO., SWINDON.

EVANS' FLUID EXTRACTS.

SPECIMEN OF BOTTLE AND FRONT LABEL.



EVANS' FLUID EXTRACTS are now perfected in our laboratories. They are prepared by elaborate processes, with the menstruum most suited to each individual drug; they contain the whole of the active medicinal properties. Infusions, decoctions, tinctures, wines, and syrups can be obtained from these fluid extracts, by mixing one minim for every grain of the drug. They are put up in actinic glass bottles, of 5, 10, and 20 fluid ounces, capsuled with a large gold front label; a special feature, to assist in dispensing, is the back label, containing full scientific names, botanical origin, description, medical properties, dose, strength, active ingredients, &c.

Complete List and Prices on application.

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Canada: EVANS AND SONS (LIMITED), Montreal and Toronto.
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EVANS' SALINE.

(EFFERVESCING.)

This preparation is a Mixture, in definite proportions, of Chlorate of Potash, English Tartaric Acid, Bicarbonate of Soda, and a little Cane Sugar. The proportion of these ingredients always remains the same. This and the pleasant excess of acid, characterise EVANS' SALINE. A dry mobile powder, dissolving perfectly.

BOTTLES, WITH CHEMISTS' OWN NAME, OR IN BULK.

FIVE NEW ARTISTIC DESIGNS FOR WRAPPERS FOR THE SEASON.

EVANS' OL. RICINI SINE SAPORE.

(TASTELESS.)

This CASTOR OIL is EXPRESSLY AND SOLELY manufactured for us. It is produced by a process which removes the taste, though not the efficacious properties.

EVANS' COATED PILLS.

Pearl coated, readily soluble, prepared in our own laboratory, with best drugs only, such as are used in all Evans' Pharmaceutical Preparations.

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Imported and freshly ground at their own mills from *Closed Flowers*.

In bulk, or in 6d. and 1s. tins, with perforated rotary top.

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The characteristics of about 300 of the Drugs and Chemicals recently introduced into Medicine, with their Therapeutics, Authorities, Doses, Formule. Among them are full information about Sozoiodol, Pyrocin, Salix Nigra, Pichi, Jacaranda, Terpin, Thallin, Salol, Iodol, Jambul, Pyridin, Doundaké, &c., &c.

Price 2/6, post free 2/8, post free abroad 3/.

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THE ONLY REALLY PERFECT CAPPED BOTTLE FOR VASELINE, POMADE, DRY POWDERS, &c.

PRICES (in 5-gross Lots):—Fitted with STRONG METAL CAPS, CORK-LINED, in various colours, very attractive in appearance—1 oz., 12/; 1½ oz., 13/; 2 oz., 13/6; 3 oz., 16/; 4 oz., 18/ per gross.

Fitted with best BOXWOOD CAPS—1 oz., 15/6; 1½ oz., 16/6; 2 oz., 17/6; 3 oz., 21/6; 4 oz., 24/6 per gross.

Chemists' and Perfumers' Bottles in great variety, Plain or Stoppered. Orders may be sent to the PRINCIPAL WHOLESALE HOUSES.

R. H. BARRETT,

FLINT GLASS BOTTLE WORKS,
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Telegraphic Address—"FOREFRONT LONDON."

GEORGE TREBLE & SON,

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CHEMISTS' SHOP FITTINGS & SHOW CASES.

SHOPS FITTED FROM £50.

DESIGNS AND ESTIMATES SUPPLIED IN TOWN OR COUNTRY.

ESTABLISHED FORTY YEARS.

HIGHEST REFERENCES CAN BE GIVEN.

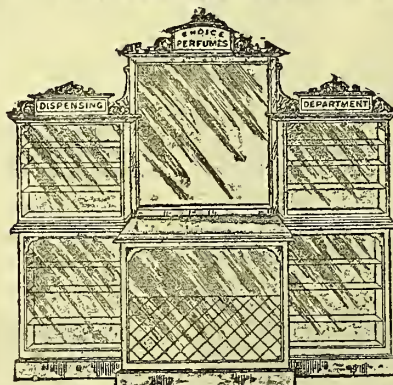
THREE PRIZE MEDALS.

Steam Factory: 27 CANAL ROAD, HOXTON, LONDON.

"THE CHEMIST" DISPENSING COUNTER.

6 feet long by 2 feet wide .. £24
If the Dispensing Screen only, £12

This handsome Dispensing Counter is manufactured in Spanish mahogany, and of the best workmanship, so that it will stand any climate. The counter has a solid mahogany top, and plate-glass case front. The centre part fitted to take sponge. A mahogany screen on top, consisting of two plate-glass cases, with shelves inside, and large plate-glass mirror in the centre, and three glass tablets with gold writing in ornamental mahogany carved work. The back of screen fitted with small shelves and a glass poison cupboard. The inside of counter fitted with strong counter drawers, label and cork drawer, open shelves, &c.



NOTICE TO THE TRADE

In consequence of inferior Second-hand Goods being sold for our make, we have found it necessary to protect our reputation for best work with a Trade Mark, as above, and unless goods are so stamped we cannot be answerable.

BOWLING & GOVIER

Manufacturers of High-class Shop Fittings,
GUN ST., BRUSHFIELD ST.
BISHOPSGATE, E.C.

ESTABLISHED 1830.

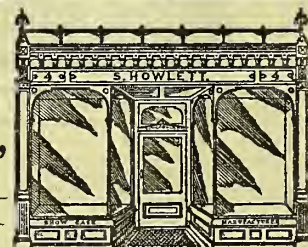
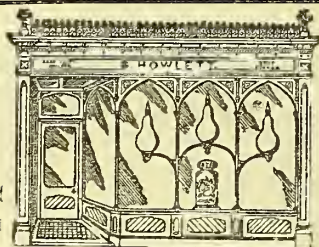
S. HOWLETT,

MEDICAL AND

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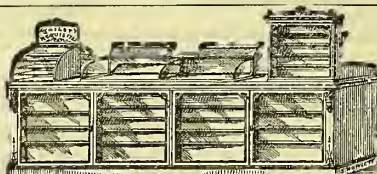
Shop-Front Builder and Show-Case Maker.

EXPORT ORDERS CAREFULLY PACKED AND SHIPPED.



SHOPS FITTED by Contract, in Town or Country, with every requisite, on the most improved principles, and at lowest prices.

Numerous REFERENCES may be obtained of Leading Chemists in all parts of the Kingdom.



A LARGE STOCK of New and Second-hand Fittings and Cases to be sold very CHEAP.

CABINET FITTER to the Pharmaceutical Society of Great Britain.

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Manufactory and Showrooms—4 Lindley St., Staney St., Mile End Road, LONDON, E.



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SYDNEY, 1879.



PHILADELPHIA, 1876.

KILNER BROTHERS,



PARIS, 1878.



PARIS, 1875.

GLASS BOTTLE MANUFACTURERS.



EXCELLENT
QUALITY.
EXTENSIVE
VARIETY.
PRICES LOW.

Dispensing.



LONDON, 1862.

TELEGRAPHIC ADDRESS—
"BOTTLES
LONDON."

TELEPHONE MESSAGES, No. 7509.



Dispensing.

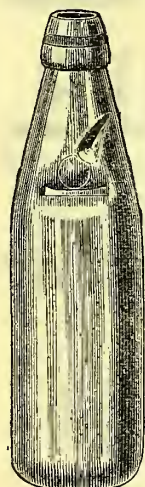
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SAMPLES SENT
ON
APPLICATION.

FEEDING, PICKLE,
DRUG, OIL,
SAUCE, VINEGAR
BOTTLES.



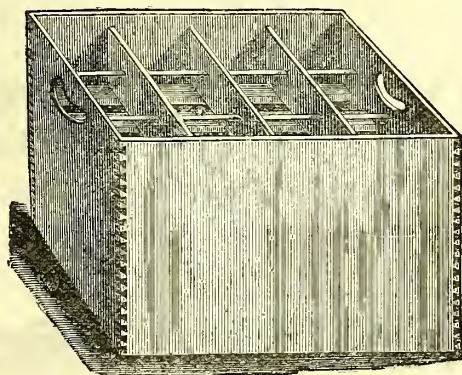
Feeding.

WINE, SPIRIT,
BEER,
CONFECTIONERY
BOTTLES.



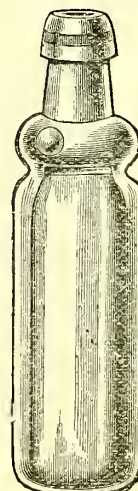
Mineral Water
BOTTLES.

VAN



BOXES, CASES,

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Mineral Water
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No. 3^A GREAT NORTHERN GOODS STATION, KING'S CROSS, LONDON.



HUNT'S BOTTLE CAPS

Pleated Paper, from 8d.
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LONDON :

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Depot of DIGNÉ'S ENZYMES.

DISPENSING BOTTLES & PHIALS

WE NOW SUPPLY OUR CELEBRATED

6 and 8 oz. Bottles at 7/6 per gross.

3 „ 4 oz. ditto 6/6 „

All other Sizes and Kinds equally low.

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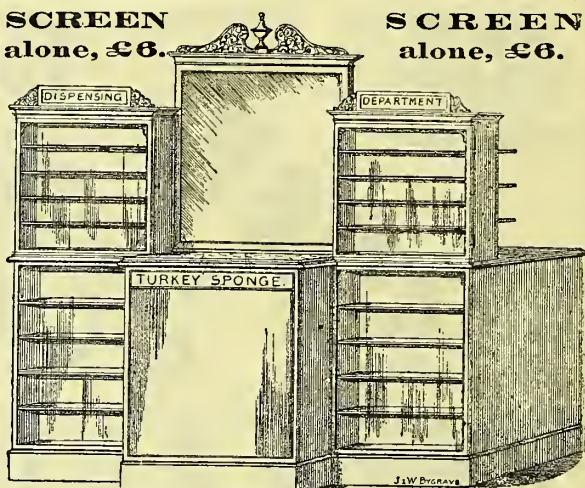
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25 Francis St., Tottenham Court Road, London, W.C.

Established upwards of 50 years. Bankers : London and Westminster Bank.

SCREEN
alone, £6.

SCREEN
alone, £6.



The above represents a solid mahogany Dispensing Screen and glass fronted Counter. The Screen has a glass case at each side, with plate-glass tablets and gold writing on top—"Dispensing Department"; and a Plate-glass mirror with marble slab in centre, with mahogany ornamental wood on top. Doors of screen are glazed with best 21-oz. glass, and inside the cases are polished black, with three long shelves right along the back for dispensing bottles. The Counter opens in front with three solid mahogany doors glazed with best 21-oz. glass, centre for sponges underneath. Counter at the back is fitted with a nest of deal drawers and shelves. If 6 feet long, and 5 feet high to top of cases, complete, £11 10s.

J. & W. BYGRAVE,
SHOP FITTERS,

111 Shepherdess Walk, City Road, LONDON, N.

For further particulars please send Business Card.

KNIGHT'S PATENT 'RELIANCE' GUM AND LIQUID GLUE.

In 1d., 3d., 6d., 9d., and 1s. Bottles.

THE CHEAPEST AND STRONGEST ADHESIVES
IN THE MARKET.

Warranted Absolutely Free from Acid.



REGISTERED TRADE MARK.

KNIGHT & CO.

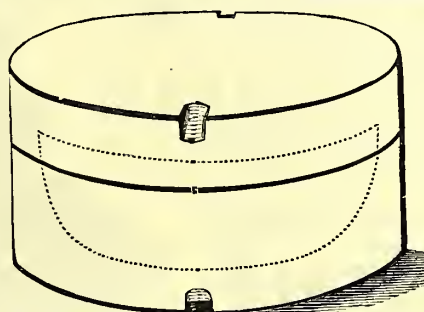
5 WATER LANE, GT. TOWER STREET, LONDON, E.C.

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TOOGOOD'S IMPROVED PATENT EARTHENWARE COVERED POTS

Are claimed to be the most
perfect and convenient yet offered to
the Trade.



Owing to the increasing demand
for our Patent Pots, we have in-
troduced a Special THIN Series
for Dispensing.

These Pots are beautifully
glazed and finished, and, being
very light, are specially adapted
for sending by post.

ORDINARY THICKNESS—

1 dr.	2 dr.	$\frac{1}{2}$	$\frac{3}{4}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{2}{2}$	$\frac{3}{10}$	$\frac{4}{4}$	$\frac{6}{6}$	$\frac{8}{8}$ ounces.
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{7}$	$\frac{1}{8}$	$\frac{1}{10}$	$\frac{2}{2}$	$\frac{3}{10}$	$\frac{4}{4}$	$\frac{6}{6}$	$\frac{8}{8}$ per doz.

THIN FOR DISPENSING—

$\frac{1}{7}$	$\frac{2}{8}$	$\frac{1}{10}$	$\frac{1}{2}$	$\frac{2}{4}$	$\frac{3}{3}$	$\frac{4}{8}$	$\frac{6}{5}$	$\frac{8}{6}$ ounces.
								per doz.

Forwarded Free to all parts of the World on application, enclosing business card.

WILLIAM TOOGOOD'S NEW ILLUSTRATED PRICE CURRENT

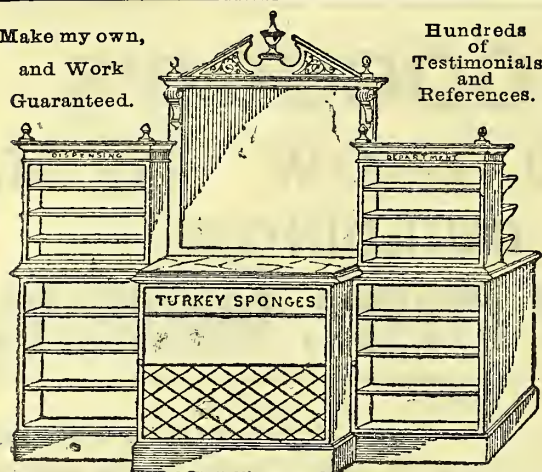
OF

Glass Bottles, Glassware, Earthenware,
Apparatus, Implements, and Utensils,
FOR THE USE OF CHEMISTS AND DRUGGISTS.

DRUGGISTS' SUNDRIES OF ALL KINDS.

Colonial and Foreign Enquiries and Correspondence solicited.

Make my own,
and Work
Guaranteed.



Hundreds
of
Testimonials
and
References.

The above represents a Plate-glass and Mahogany Dispensing Screen and Counter. The cases on each side of the marble slab over sponge case have silvered glass backs, and are fitted with movable shelves; the cases in front of counter are also fitted with movable shelves. The mahogany used is beautifully figured. At back under counter fitted with Drawers for Corks, Labels, Paper, &c., &c., and the back of screen with three shelves the entire length for Bottles.

6 ft. long, complete, £16; if Screen only, without Counter, £8 10s.

ELKANAH NATALI

(Established 20 Years),

SHOW CASE MAKER AND SHOP FITTER,

207 OLD STREET (Shoreditch End), LONDON;

Workshops—HENSON STREET, E.C.

(ONLY ADDRESSES).

No connection with any other house of the same name
PLEASE ADDRESS IN FULL.

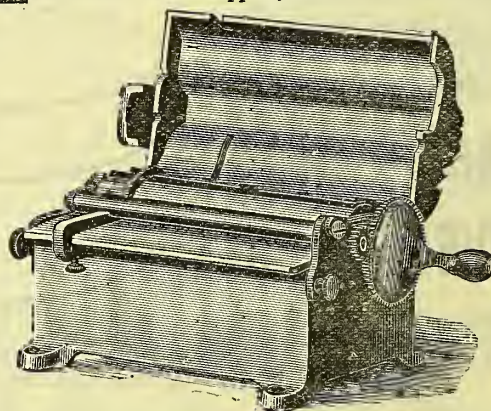
JOHN HOLROYD & CO., LIM.

Engineers, Tool Makers, and Machinists,
TOMLINSON ST. WORKS, HULME,
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MACHINES FOR MAKING COMPRESSED TABLETS.

MACHINES FOR GUMMING

Either an entire surface or the edge only of Labels,
Wrappers, &c.



Machines Built to Contract for Inventors and
Merchants.

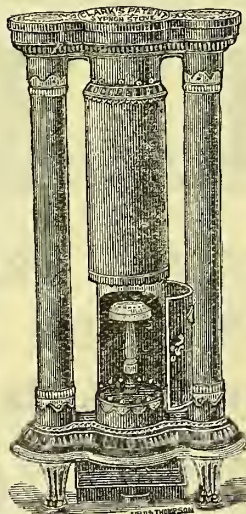
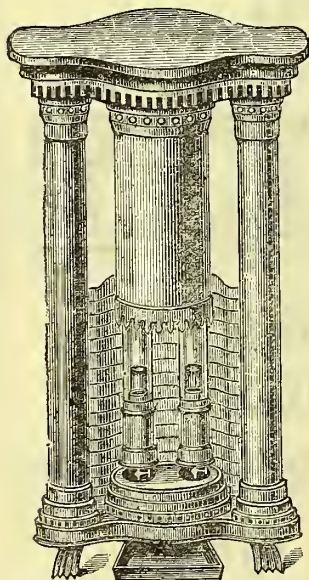
TO CHEMISTS AND DRUGGISTS.

AGENTS WANTED FOR THE SALE OF CLARK'S PATENT

"SYPHON" (REGISTERED TITLE) HYGIENIC CONDENSING GAS HEATING-STOVES.

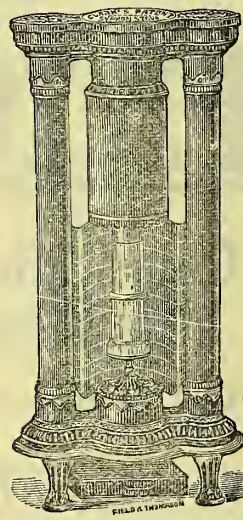
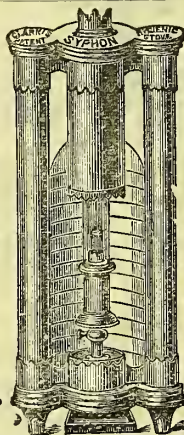
NO FLUE REQUIRED. ARE FREE FROM SMELL OR SMOKE.

All injurious vapours are reduced to harmless liquid inside the Stove, and passed out at foot into a tray provided for that purpose.



For Use in Hospitals, Sick
Chambers, Bedrooms, Halls, Con-
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Specially
suitable for
patients
suffering from
Bronchial
affections, as a
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Respectfully beg to inform their Customers and Friends that they have completed, and are now working, their NEW and EXTENSIVE GLASS WORKS at Lea Bridge, Clapton, London, E. The Furnaces are built in the LATEST STYLE, and fitted with EVERY MODERN IMPROVEMENT. Large orders can now be executed at a few days' notice.

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IN ADDITION TO SEVERAL PREVIOUS HONOURS, THE

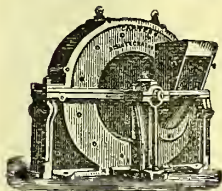
GOLD MEDAL

At the PARIS EXHIBITION, 1889, was awarded to

J. HARRISON CARTER

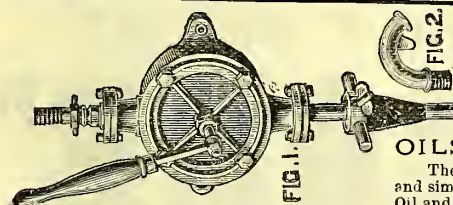
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OILS, WINES, & OTHER LIQUIDS FROM CASKS, &c.

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Have the Largest Sale of any Medicine in the World.

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SPECIALITY FOR PERFUMERY.

This pure grain spirit, which has been thrice rectified and filtered through charcoal, is being largely used in making high-class Perfumes.

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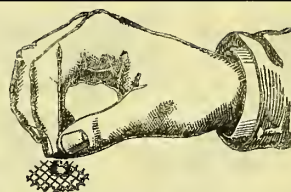
The Needle is only $\frac{1}{2}$ inch long, and being enclosed by a metal cup prevents the escape of the injection. It causes very much less pain than the ordinary syringe. The syringes are fitted with our patent "Asbestos" pistons, a great improvement over leather pistons, as no lubricant is required, and always ready for use.

PRICES:—		s.	d.
In case, p'ated	..	4	6
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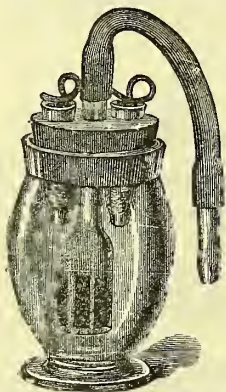
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Tubes, 2s. each; Half Tubes, 1s. each. Pomade in vials, 5s.

HUMAN VACCINE, from healthy children only, microscopically examined and source quoted. Tubes, two-thirds full, 1s. 8d. each; Tubes one-third full and Lancet-charged points, 1s. each; Pin-points, 1s. 1d. each. Eighteen charged Small Points, 5s. Tubes, two-thirds full (same as those mentioned above, but without source), in quantities for export, £5 per 100 Tubes. Pin-points uncharged, 1s. per dozen. Vaccine Ejectors, 1s. 3d. each, including postage. Vaccinations by appointment. P.O.O.'s (including postage, and crossed London and Westminster Bank), with orders, payable to
EDWARD DARKE, Secretary.
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BY ROYAL LETTERS PATENT, NO. 16,713.—DECEMBER 20, 1886.



GODFREY'S CHLORIDE of AMMONIUM INHALER

Catarrhal Throat and Ear Affections, Loss of Voice,
Bronchial Asthma, and Hay Fever.

The SIMPLEST FORM of INHALER.

VERY PORTABLE. CONTAINS NO WATER.

Silver Medal, Brussels Exhibition, 1888. Yields a plentiful cloud of Neutral Vapour, with little or no effort on the part of the patient.

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PRICE 7s. 6d. RETAIL.

May be obtained through S. MAW, SON & THOMPSON, London.
Illustrated Prospectus, with the "History of Chloride of Ammonium as a Remedial Agent,"
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FOR THE TREATMENT AND CURE OF ALL

DISEASES OF THE LUNGS, WINDPIPE, NOSE, AND THROAT,

Claims to be a Specific for all Congestive and Inflammatory conditions of the Respiratory Apparatus, and will be found efficacious in

COUGHS AND COLDS, ASTHMA, BRONCHITIS,

Inflammation and Congestion of the Lungs, Pneumonia, Pleurisy, Whooping Cough, Croup, Diphtheria, Pharyngitis, Laryngitis, Catarrh, Sore Throat, Quinsy, Enlarged Tonsils, Hoarseness, Loss of Voice, Colds in the Head, Hay Fever, and all other Complaints of the Respiratory Organs.

PREPARED ONLY BY THE INVENTOR.

None Genuine except such as bears the above Trade Mark "SPIRONE" and the Signature of the Inventor upon the Bottle on the Label over the Cork, and on the Wrapper,

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The Discoverer of the Specific Cure for Consumption, and of the Medicinal Properties of the Hypophosphites

Price 4s. 6d. and 11s. per Bottle.

SET OF APPARATUS FOR ADMINISTRATION, 15/. PAMPHLETS AND SHOWCARDS FREE ON APPLICATION.

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THE TEETHING PADS TO SELL. THE "LILY" BABY COMFORTER.

The teats are seamless, and always retain their proper shape.

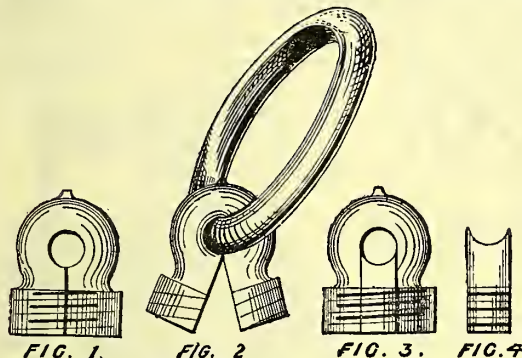
THE CHILD CANNOT POSSIBLY IMBIBE AIR.

The chief feature of this invention is the free ingress and egress of air into and from the teat during suction.

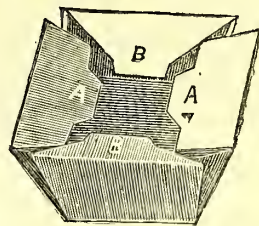
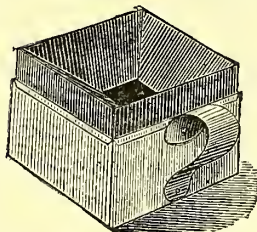
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All Patterns may now be had, fitted with Marriott's New Patent Ring Socket. No. 17,135.

For inserting Bone, Indiarubber, and other Rings into Teething Pads, Baby Comforters, or other articles without cutting the ring, which is guaranteed not to break.

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The most approved, most convenient, most complete, and cheapest antiseptic dressing for any kind of wound.

A complete wound dressing for the surgery, hospital, accident ward, dispensary, ship's surgery, railway surgery, shipbuilding yard, mines, docks, and the battle-field.

Specimens free from any wholesale house, or direct from

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Contracts undertaken and tenders given for the supply of Antiseptic and all other Surgical Dressings in any quantity.

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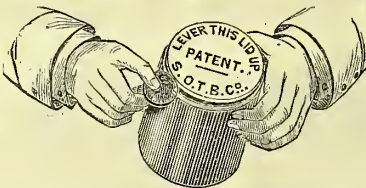
Telegrams—"LISTERISM LONDON."

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The largest
Tin Box
Works in the
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Ten Prize
Medals
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Tins of
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Oils, Paints,
Drugs,
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Preserves,
Vaseline, &c.

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ROUND, OVAL, AND SQUARE SHAPED BOXES

FOR POSTAL AND GENERAL PURPOSES.

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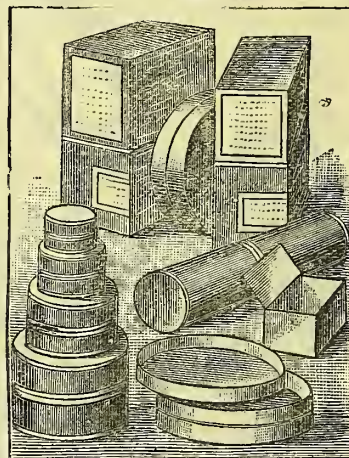
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Makers of best class of Violet Powder Boxes, and high-class goods of
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STEAM WORKS, 2 PRINTER'S BUILDINGS.

[2]

**CHALMERS' PATENT SAMPLE AND PARCELS POST BOX.****THE ONLY BOX**

That fulfils ALL the requirements of the POST OFFICE.



Is fastened INSTANTLY.

Cannot open by accident.

Is immensely strong.

Has no corners.

No seams, joints, nor solder.

Nothing to scratch or tear letters.

Is practically airtight:—Is used
for Flour, Cherry Blossom,
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Dispenses with string, bags, and
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Saves 19 minutes out of 20.

94,500 SOLD IN THREE MONTHS

SAVING THEIR OWN COST.

W. B. CHALMERS 37 MINCING LANE,
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SHIRLEY'S SALEABLE WINTER LINES.

Anti-Catarrh Smelling Salts.



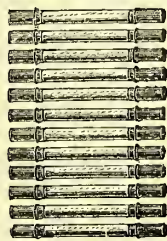
The best Winter Salts in the market.

Attractively put up in well stoppered bottles.

6d. size, 4/- doz.

1s. size, in wide-mouthed actinic green bottle, 6/6 doz.

COCAINE & MENTHOL TOOTHACHE TUBE 6P



Cocaine & Menthol Toothache Tube.

A composition of two such powerful anodynes is sufficient guarantee of their efficacy.

Attractively carded. 3/8 doz.

LIP SALVE.

4d. size in push-up cases. Delicately Scented. Rich Colour. 1 doz. in glass outer, 2/- doz.



1d. size, in pocketable flat wooden box, prettily labelled and carded, 7/- gross.

Quality of Lip Salve equal to that in 4d. size.


WINTER SOCKS.

A SURE preventive of cold and damp feet. This is a capital selling line for Chemists. Put up 12 on a card, assorted zes. 3/8 dozen.

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HAVE A QUICK SALE IN COLD WEATHER.

No. 3.—Large-sized Baroscope.—1/-. Combining Thermometer and Storm Glass. Boxwood or Ebonised. 6 on a card. 7/- doz.	No. 2.—Same as No. 3.—9d. Only smaller. 6 on a card. 5/- doz.	No. 1.—Thermometer.—6d. Ebonised or White Enamel. 1 doz. on a card. 4/-.	No. 4.—Thermometer.—1/6. Superior Metal Scale on Black Enamel. 6 on a card. 9/-.
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✓  Order a special 20/- parcel of above goods, assorted, as follows:—1 doz. Anti-Catarrh Salts, 4/-; 1 doz. Toothache Tubes, 3/8; 1 doz. 4d. Lip Salve, 2/-; 6 doz. 1d. Lip Salve, 3/6; 1 doz. Winter Socks, 3/8; and 1 doz. 6d. Thermometers, 4/-. This assortment will produce 34/-, thus making a profit of 14/- on an outlay of 20/-. ✓

MENTHOL CONES.

BE PREPARED FOR THE WINTER, IT IS BOUND TO COME.

 In a recent Trade Voting, out of 805 voters, Shirley's A1 Brand secured 644 votes, and all the other makers put together but 161. Chemists who do not now buy Shirley's would do well to ask themselves how it is that this Brand secured four times as many votes as all others put together? The answer is simple. Quality is first-class, get-up of Cones is attractive, every assistance given to Retailers in selling, by supplying Dummy Cones, China Models, Cards, &c.



This Elegant Biscuit-China Figure, an Ornament to any Shop,

GIVEN AWAY

To Purchasers of 25/- worth of

SHIRLEY'S A1 BRAND MENTHOL,

Or two if 40/- Order is Placed.

The following special parcels have been arranged to suit all classes of trade:—

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Parcel 2, 25/-. 4 doz. 6d., 2 doz. 4d., 1 doz. 1s.	Parcel 6, 40/-. 5 doz. 6d., 3 doz. 4d., 2 doz. 1s.
Parcel 3, 25/-. 3 doz. 3d., 2 doz. 1s., 1 doz. 4d.	Parcel 7, 40/-. 4 doz. 6d., 4 doz. 4d., 1 doz. 9d., 2 doz. 1s.
Parcel 4, 25/-. 1 doz. 9d., 2 1/2 doz. 1s., 1 doz. 1s. 6d.	Parcel 8, 40/-. 4 doz. 1s., 2 doz. 9d., 1 doz. 1s. 6d.

By calculating what each of the parcels would realise when sold, it will be found that they yield an average profit of 80 per cent. to the retailer on his outlay.

1d., 2d., and 3d. Cones put up for those wanting cheap goods.

1d.—3 doz. on card. No. 110.—Bottle Shape, 7/6 gross. " 110v.—Vase " 7/6 " " 110p.—Pedestal " 8/- "	2d.—3 doz. on card. No. 114.—Varnished Pedestal, 16/- gross.
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SPECIAL QUOTATIONS TO LARGE BUYERS.

Good selling Boxwood Shapes are No. 112, 6d. flat, 3/3 doz.; No. 113, Cartridge Shape, 3/6; No. 111, large Pedestal, 7/-.

OCTOBER is always the busiest Month in Menthol Cones, so please order early to ensure delivery. Do not wait till the cold actually sets in, but be prepared.

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And 11, 12, and 13 ROSE STREET, NEWGATE STREET.

CARBOLIC POWDER, £4 TON.

1-ton lots and upwards.

CARBOLIC PINK POWDER, 5/-, 7/6, and 10/- per cwt., in bags or casks.**WHITE CARBOLIC POWDER**, 10 %, 15 %, and 20 %, equally cheap.**HANDSOME LARGE DECORATED BLACK AND GOLD TIN BOXES.**Holding 1½ lb. (usual 1/- size), 4/6 doz. Ditto, **LARGE SIZE** (usual 1/6 size), holding about double quantity, 6/- doz.**PALE CARBOLIC ACID**, 99 per cent. (No. 5), and **CHLORIDE OF LIME** below market prices**CRUDE CARBOLIC ACID** (Brown), 1/-, and 1/6 Gallon; also in patent stoppered bottles, labelled.**SANITARY FLUID** or **CREOSOL** (to be used with 100 parts of water, making a *milky fluid*), half usual prices

All goods delivered free in London or suburbs, or to rail or docks.

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WILEY'S CHEMICAL ESSENCE

FOR

LAMENESS IN HORSES.

Agents Wanted in every Town. Handbills, with Name and Address, supplied gratis.

50 YEARS' UNBROKEN SUCCESS.**SOLE MAKER & PROPRIETOR, J. ROOKLEDGE, CHEMIST, EASINGWOLD, YORKS.**

TO BE HAD OF USUAL WHOLESALE HOUSES.

BATTLE'S VERMIN KILLER.

TRADE MARK.



Mice eat it readily and die on the spot.

Has an immense Sale, and wherever introduced never fails to give satisfaction. Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs. Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

TESTIMONIALS.—Thousands might be published.

From Mr. THOMAS COLTON, Agent for Selby. A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet. From Mr. EDWARD STURDY, Flemington Mills. duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets. Leeds, November 8th, 1887. I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS. THOMAS B. CROSLAND. Mr. Stead.

Sold in Packets, 3d., 6d., and 1s. each.

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No Chemist or Storekeeper should be without a supply.

WALKER, TROKE & CO.

WHOLESALE AND EXPORT DRUGGISTS

82 CITY ROAD, LONDON, E.C.

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Leyton, Essex,

Writes:— April 5, 1889.

I have great pleasure in saying that your Quinine Tonic Ball exceeded my anticipations. Horses in low condition, and those recovering from illness, showed marked improvement after treatment with them. The Quinine Tonic Ball should prove a boon to all owners of horses.

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I have used your Quinine Tonic Balls, and consider them invaluable for animals recovering from any severe illness, specially from influenza.

GABRIEL & TROKE'S QUININE TONIC and STIMULATING GELATINE CAPSULED HORSE BALLS

(Registered No. 81,291).

Alterative, Condition, Cordial, Cough, Diuretic, Fever, Physic, and Worm Balls.

GABRIEL & TROKE WERE THE FIRST MAKERS OF GELATINE CAPSULED HORSE BALLS.

ANGLO-AMERICAN OIL COMPANY, LIM.

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American Refined Petroleum.

The long established superiority of "**Tea Rose**," "**Royal Daylight**," "**White Rose**," and "**Westminster**" American Petroleum Oils, manufactured by the Standard Oil Company of the United States, is well known to the Trade and to Consumers, and no Oils are so widely and justly celebrated. Their superior burning qualities, freedom from odour and from any tendency to smoke, and their general excellence, have placed them above comparison with any and all other brands.

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Our Tank Steamers, "**Manhattan**" and "**Bayonne**," in their construction, arrangements, power and size, are in advance of any tank steamers afloat, and each has a carrying capacity of 4,000 tons, equivalent to 28,000 barrels of Oil by each steamer.

We shall keep large stocks of these Oils constantly on hand at all our Importing Centres and Depôts, and in this manner be able to supply the Trade promptly. Being the representatives in the United Kingdom of the Standard Oil Company, of America, we are in the best possible position for supplying the trade on the most favourable terms.

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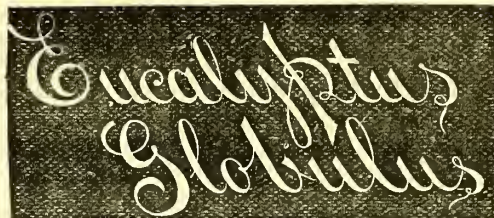
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326	"DREADNOUGHT," felt, covering chest and back	No. 1	2	3	4	5	6	
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